ACPTC Proceedings

Combined Central, Eastern and Western Regional Meetings

1984

Edited by

Sandra S. Hutton
Sara Douglas, Central Region
Jo B. Paoletti, Eastern Region
Renee Thackeray, Western Region

Association of College Professors
of
Textiles and Clothing, Inc.
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Central Region
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<td><strong>President</strong></td>
<td>Dr. Marilyn DeLong&lt;br&gt;Design, Housing and Apparel&lt;br&gt;College of Home Economics&lt;br&gt;University of Minnesota&lt;br&gt;McNeal 362&lt;br&gt;St. Paul, MN 55108</td>
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<td><strong>President-Elect</strong></td>
<td>Dr. Hilda Buckley&lt;br&gt;School of Human Resources and Family Studies&lt;br&gt;233 Bevier Hall&lt;br&gt;Urbana, IL 61801</td>
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<td><strong>Secretary</strong></td>
<td>Dr. Kitty Dickerson&lt;br&gt;Department of Clothing and Textiles&lt;br&gt;University of Missouri - Columbia&lt;br&gt;Columbia, MO 65211</td>
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<td>Dr. Mary Frances Drake&lt;br&gt;College of Home Economics&lt;br&gt;University of Tennessee&lt;br&gt;Knoxville, TN 37916</td>
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<td>Dr. Mary Littrell&lt;br&gt;Department of Textiles and Clothing&lt;br&gt;152 LeBaron&lt;br&gt;Iowa State University&lt;br&gt;Ames, IA 50011</td>
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### Council Members

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<tr>
<th>Serving to Fall 1984</th>
<th>Dr. Ruth Marshall&lt;br&gt;Dept. of Textiles and Clothing - 148 LeBaron&lt;br&gt;Iowa State University&lt;br&gt;Ames, IA 50011</th>
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<td>Serving to Fall 1985</td>
<td>Dr. Jacquelyn DeJonge&lt;br&gt;Dept. of Textiles Merchandising and Design&lt;br&gt;University of Tennessee&lt;br&gt;Knoxville, TN 37910</td>
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<td>Serving to Fall 1986</td>
<td>Dr. Lynne Richards&lt;br&gt;Department of Clothing and Textiles&lt;br&gt;Box 4170&lt;br&gt;Texas Tech University&lt;br&gt;Lubbock, TX 79409</td>
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Alternate to Council
Serving to Fall 1984

Dr. Betty Feather
Department of Clothing and Textiles
University of Missouri - Columbia
Columbia, MO 65211

National Executive Board
Serving to Fall 1984

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Iowa State University
Ames, IA 50011

Serving to Fall 1985

Dr. Esther Meacham
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1787 Neil Avenue
Columbus, OH 43210

Alternate to National Executive Board
Serving to Fall 1984

Dr. Agatha Huepenbecker
Department of Textiles and Clothing
140 LeBaron Hall
Iowa State University
Ames, IA 50011
ACPTC-CR COMMITTEES, 1984

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<td>Mary F. Drake</td>
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**APPOINTED POSITIONS**

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<td>Historian</td>
<td>Mary Littrell</td>
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<td>Newsletter Editor</td>
<td>Sandra Hutton</td>
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<td>ASTM Rep (83-85)</td>
<td>Ruth Franzen</td>
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<td>Patricia Cunningham</td>
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ASSOCIATION OF COLLEGE PROFESSORS OF TEXTILES AND CLOTHING
CENTRAL REGION CONFERENCE
OCTOBER 25-27, 1984

QUALITY INN KNOXVILLE, TENNESSEE

SHAPING THE FUTURE OF OUR PROFESSION

Wednesday, October 24

7:00 - 9:00 a.m. Registration
7:30 - 9:00 a.m. ACPTC 1986 Conference Planning Meeting

Thursday, October 25

7:30 - 1:30 p.m. Registration
8:00 - 1:00 p.m. Arrowmont Craft Demonstration
8:00 - 1:00 p.m. Cade's Cove Culture and Color Tour
8:00 - 12:30 p.m. Retailing Systems in the Computer Age
9:00 - 12:30 p.m. Apparel Manufacturing
9:00 - 12:30 p.m. USDA Textiles and Clothing Lab and TMD Processing Lab
9:00 - 12:30 p.m. Theatrical Costumes Behind the Scenes
9:00 - 10:30 a.m. Meeting of 1984 Council
10:30 - 12:00 noon Meeting of Workshop Group Leaders

1:30 - 3:30 p.m. Opening General Session
Presiding: Marilyn DeLong, ACPTC-CR President, University of Minnesota
Welcome: Jacquelyn DeJonge, University of Tennessee
Homer Fisher, Vice-Chancellor, University of Tennessee

Overview of Conference: Marilyn DeLong
1:45 - 3:00 p.m. Panel "Technology and Its Effect on Our Field"
Moderator: Dorothy Behling, Bowling Green State University
Participants:
"Computer Production of Custom Fitted Garments" Francesann Heisey, University of Wisconsin
"Computer Software for Consumer Decision Making"
Janis Stone and Kathy Beery, Iowa State University
"Computer Simulations for Teaching Retail Management Concepts"
Laura D. Jolly, Oklahoma State University

3:00 - 3:30 p.m. Address "Futures Perspective: Translating Intent into Action"
Speaker: Penny Damlo, Anticipatory Sciences, Minneapolis, MN
3:30 - 3:45 p.m. Break

3:45 - 5:00 p.m. Concurrent Sessions "Generate Action Steps"
National/International Scope of the Field
Mary Littrell, Iowa State University
Technology
Joan Laughlin, University of Nebraska
Perceived Image
Barbara Stowe, Kansas State University
Leadership
Marilyn DeLong, University of Minnesota
Program Development
Hilda Buckley, University of Illinois
Research
Geite1 Winakor, Iowa State University
Service
Betty Feather, University of Missouri

5:30 - 6:45 p.m. Reception and Exhibition Opening
Coordinators:
Robert Hillestad, University of Nebraska
Lynne Richards, Texas Tech University

Artists, Juried Section:
Robert Hillestad
Sharla Hoskin
Jan Jackson
Ardis Rewerts
Marilee Stand
Margaret Warner
Beate Zieger

Artists, Invitational:
Sharla Hoskins
Jan Jackson
Ardis Rewerts
Flo Barry (Juror)
Richard Daehnert (Juror)

7:00 p.m. Dinner
Presiding:
Speaker:
Charles Cox, University of Tennessee
"Cutting the Profession from the Whole Cloth: Image and Substance"
Dean Nancy Belck, College of Home Economics, University of Tennessee

Friday, October 26

8:00 - 10:00 a.m. Research Reporting Session I

A. Cultural, Social-Psychological Reports
Session Monitor, Elizabeth McCullough, Kansas State University

8:00 - 8:24 a.m. "Kalabari Female Apearance and the Tradition of Iria"
M. Catherine Daly, University of Minnesota, ACPTC Fellowship Recipient
8:24 - 8:48 a.m.  "Changing Attitudes of College Women and Fashion Leadership in India"
    Usha Chowdhary, Miami University, ACPTC Fellowship Recipient, and Lois E. Dickey, Ohio State University

8:48 - 9:12 a.m.  "Western and Nonwestern Dress: A Re-examination and a Proposed Typology"
    Catherine A. Cerny, Suzanne Baizerman, and Joanne B. Eicher, University of Minnesota

9:12 - 9:36 a.m.  "Correspondent Inference: An Empirical Application"
    Sarah J. Sweat, Texas Christian University, and Mary Ann Zentner, Virginia Tech University

9:36 - 10:00 a.m.  "Classification of Information Communicated Through Dress"
    Mary Lynn Damhorst, Iowa State University

B. Economic, Educational Reports
    Session Monitor, Geitel Winakor, Iowa State University

8:00 - 8:24 a.m.  "Product Schemas in Perception of an Apparel Product"
    Marilyn DeLong, Bettie Minshall, and Catherine Cerny, University of Minnesota

8:24 - 8:48 a.m.  "The Influences of United States-Taiwan Bilateral Agreements on the Prices of Imported Apparel"
    Tina Su-Wen Cheng and Kitty Dickerson, University of Missouri

8:48 - 9:12 a.m.  "Analysis of Computer Usage in Retail Store Management for Development of Computer Simulations"
    Laura D. Jolly and Grovalynn Sisler, Oklahoma State University

    Dorothy U. Behling, Bowling Green State University

9:36 - 10:00 a.m.  "Qualifications for Women in the Textile and Apparel Industries for Management Positions"
    Maureen Grasso, University of Texas, and Jacquelyn A. DeJonge, University of Tennessee

10:00 - 10:15 a.m.  Break

10:15 - 10:45 a.m.  Concurrent Sessions "Prioritizing Within Opportunity Areas"

11:00 - 12:30 p.m.  ACPTC Business Meeting
    Presiding: Marilyn DeLong, University of Minnesota

12:45 - 1:45 p.m.  Lunch and Round Table Discussions
Research Reporting Session II

A. Social-Psychological Reports
   Session Monitor, Carolyn Callis, University of Texas
   
   2:00 - 2:24 p.m. "Clothing Interests and Body Cathexis of High School Cheerleaders"
   Mary Lynn Damhorst and Mary Ann Littrell, Iowa State University
   
   2:24 - 2:48 p.m. "Grooming Cues and Occupation: Influence on Person Perception"
   Elizabeth Ann Berger and Mary Ann Littrell, Iowa State University
   
   2:48 - 3:12 p.m. "Clothing Behavior as Related to an Awareness of the Social Implications of Clothing"
   Patricia Horridge and Lynne Richards, Texas Tech University
   
   3:12 - 3:36 p.m. "Self-image/Clothing-image Congruity and Career Anchorage Related to Clothing Behavior"
   Mary Ericksen and Enid F. Tozier, Southwest Texas State University
   
   3:36 - 4:00 p.m. "The Effect of Facial Hair on Assessment of Characteristics of Job Applicants"
   J. Ann Reed and Maureen Grasso, University of Texas

B. Historic, and Other Clothing and Textile Reports
   Session Monitor, Elizabeth McCullough, Kansas State University
   
   2:00 - 2:20 p.m. "Feminine Response to a Frontier Environment as Reflected in the Dress of Kansas Women: 1854-1895"
   Sally Helvenston, Kansas State University
   
   2:00 - 2:40 p.m. "Morphological Characteristics and Changes in Historic Fibers"
   Sara Kadolph, Iowa State University
   
   2:40 - 3:00 p.m. "Durability Aspects of a Borax-based Smolder Retardant Finish for Cotton Upholstery Fabrics"
   Lenore Cheek and Neva Olsen, Louisiana State University, and Anne Wilcock, University of Guelph
   
   3:00 - 3:20 p.m. "Effects of Window Treatments in a Cold Climate"
   Helen Lunde, North Dakota State University
   
   3:20 - 3:40 p.m. "Clothing-Related Agricultural Accidents"
   Sara J. Kadolph, Iowa State University
4:00 - 6:30 p.m. Tour, University of Tennessee Textiles, Merchandising and Design Department

Educational Resource Exhibit
Patricia Cunningham,
Bowling Green State University

Participants:
"Clothing Construction Video"
Lois M. Gotwals, Purdue University
"Analysis of Professional Selling in Fashion Stores"
Phyllis Ashinger, Wayne State University
"Accessories—The Finishing Touch"
Linda M. Heaton, University of Kentucky
"Creative Teaching Techniques for a Clothing Core Course"
Margaret Ann Berry, Oklahoma State University
"Conservation Resources for Textile Heirlooms"
LoErna Palmer Simpson, University of Kentucky
"Using the Bertrand Collection for Teaching Textile Conservation"
Mary Ann Littrell and Sara J. Kadolph,
Iowa State University
"Using the Census of Manufactures in a Textile Economic Course"
Leona A. Kochner, Northern Illinois University
"Drycleaning: A Fabric Care Method"
Darlene Fratzke and Sara Kadolph,
Iowa State University
"Garment Flammability"
Sara Kadolph and Darlene Fratzke,
Iowa State University
"Self-Checking Lessons in Clothing Construction"
Bonnie D. Belleau, Louisana State University
"Use of the Microcomputer to Teach Merchandise Math"
Rita C. Kean, University of Nebraska
"Internship Interviews Bidding and Scheduling System"
Sharon Hull and Ann DuPont,
University of Texas
"Beginning Textiles Lab Exam-Fabric Swatches Inventory System"
Sharon Hull and Ardis Rewerts,
University of Texas
"Profitable Merchandising Analysis: A Computer Approach"
Laura D. Jolly and Grovalynn Sisler,
Oklahoma State University
Saturday, October 27

9:00 - 10:00 a.m. Concurrent Sessions "Prioritizing Across Opportunity Areas"

10:30 - 11:30 a.m. Brunch

11:30 - 12:30 p.m. Concluding General Session
Presiding: Hilda Buckley, ACPTC-CR President-Elect, University of Illinois
Summation: Penny Damlo, Anticipatory Sciences, Minneapolis, MN

12:30 - 2:30 p.m. Post-Conference Meeting of the 1985 Council

"Microcomputer-Assisted Instruction on Color Concepts for Apparel"
Lucille M. Terry and Janet L. Offerjost, Bowling Green State University

"Fashion Options Computer Program"
Bette Jo Dedic, University of Kentucky

"Microcomputers and Small Sewing Businesses"
Beverly E. Ledwith, Michigan State University

"Sewing for Profit Computer Software"
JoAnn S. Hilliker, University of Kentucky
CUTTING THE PROFESSION FROM THE WHOLE CLOTH: IMAGE AND SUBSTANCE

Nancy Belck, Dean, College of Home Economics
University of Tennessee

Image is a common word in the public relations field that strongly suggests how you LOOK may somehow be more important than what you actually ARE as a professional. Looks, however, can be deceiving. In fact, it's even possible to deceive ourselves with our own looks. This point was examined very cleverly by a woman writer in the Wall Street Journal a while back.

She noted that many young professional women are putting themselves into dark two-piece suits, knotting necktie-like cloth around their throats, and going off to work with attache cases in hand. However, after talking with scores of male senior executives, the writer found that almost unanimously they didn't expect women to dress like men. Indeed, many said they preferred women not to!

Joining the discussion of what kind of clothing best supports the image of upwardly mobile career women, Levi Strauss held a conference on the subject a short time ago. One expert said dark suits, ties and attache cases marked the insecure, lower-level female executive. Another expert said that was nonsense and recommended dark suits for career women at all levels. And a third expert—holding, like the other two, a Ph.D. in Textiles and Clothing—came down in the middle. HER research showed that male execs preferred women in "semi-masculine" attire; suits in light shades, but no tie. Who is right on this subject of what image different kinds of clothing present? I suspect, in a way, they are all only partly right!

Because career women are only now beginning to be highly visible in large numbers in the middle and upper ranks of business and industry, their image is still being built. In other words, if men get accustomed to seeing professional women dressed a certain way, they will come to expect them to dress like that. This means we can still create our own best business image. But, if enough women, for a long enough time, appear at work wearing that silliest of menswear, the necktie, sooner or later women will have to wear neckties.

Are females going to throw away this wonderful latitude because they don't realize that they can make their own images? Females don't have one professional image to which they must conform, at least not yet. That's because, when you come down to it, image may enhance substance, but it is not a substitute for it. That this applies to ACPTC members is clear after reading the remarks some of you made as participants in the 13 Central Region ACPTC Futures Workshops. Here are just a few of your comments having to do with image, appearance and—ultimately—substance.

...Re-examine image. ... bring in more research findings.
...C&T has image problems. ... image is fluff, fun, goody-goody
...There is lack of recognition by other home economics specialists.
...Public perception is limited. ... traditional home economics image is hard to change.

Please notice that these image comments are all other-directed. They all deal with what others think about the field rather than what those in it think. We don't too often hear a professor of textiles and clothing say something like: "I have to do more research because there are critical
areas in which our knowledge is lacking." What we do hear more frequently—and read in papers like those from the workshops—can be summed up as, "Hey! We have to do more research if we want the Provost, and others, to respect us."

Since there appears to be so much concern over what others think of us as professionals, let's consider our fellow academics first. What earns their respect and admiration?

Research? Well, maybe. But you all know that the discipline in which research takes place is of primary importance. On almost every campus the greatest prestige goes to the hard sciences, and to those few notably male-dominated professional schools turning out graduates for glamorous, highly-paid and sometimes powerful fields of employment.

One response of those in non-glamor disciplines has been to go heavily into highly theoretical research. The assumption may be that the activity itself will add the prestige that the subject doesn't. This may be why we see research articles on such topics as clothing preferences which contain mathematical and statistical models so complex that casual readers might think they are looking at a nuclear fission text.

Does this approach work? Well, on my campus, the hard scientists use the term "bench researcher," and that is the only kind they seem to genuinely respect. Nutrition and food science faculty, and some textile scientists are in fields that lend themselves to bench research, but most C&T faculty are not. The hard scientists are unlikely to be much impressed by social scientists professionally, no matter how many statistical equations they use.

So—what does impress our fellow academics if most of our research does not? In a nutshell: money and enrollments. Home economics or T&C units attracting large grants from industry or government are noticed, more by the dollar amount, perhaps, than by the research subject funded. Faculty and administrators from such units are respected despite the fact that they do not meet hard science research criteria. Consider the merchandising major in home economics—it has the program with the largest enrollment in most of our units. Given this, let's examine the questions raised in the ACPTC futures workshop report about why merchandising programs are in textiles and clothing on many campuses.

To this I offer two remarks: While merchandising could fit into a business curriculum, home economics generally, and textiles and clothing specifically, are closely concerned with much more than balance sheets: We deal—hopefully in an interdisciplinary way—from a holistic family viewpoint including esthetics. Does the business curricula include those considerations?

Next, if we have merchandising in home economics, we should capitalize on it. Need I point out that home economics-housed programs offering the most upwardly mobile and most highly-paid careers for graduates are merchandising, tourism food and lodging administration, and interior design? Yet these are among the programs that some purists may say do not belong in home economics units. However, I believe these very programs bring positive visibility to home economics in terms of career opportunities and market demand.

Now—having considered our fellow academics' opinions of us, we can move to another group: business and industry. This segment wants primarily two things from us: qualified graduates and useful, applied research. When a partnership is established between business and academic units, very effective avenues are created for bringing in scholarship, facilities and research money. But, that does not mean simply giving business and
industry what it says it wants from us. It means trying to be a step ahead of the marketplace demands. We have to generate our own new ideas and start working on such things as curriculum change before employers demand it.

Next, we have to consider our image among consumers—the practical users of our information. Many of them, I suspect, view us through contacts with Extension personnel. If, to quote again from a Futures Workshop remark, "the field is perceived as being too much fluff and goody-goody," it may be a perception fostered in part by some Extension clothing specialists and home economists who choose to de-emphasize effective resource management in favor of fashion and fun.

Even though the number of clothing experts who spend more time on fluff than substance may be small, we all know how their emphases can create a negative image for us. It is our job to give these specialists substantive, useful information to deliver to their clients.

Clearly, we have different types of professional roles to fulfill, depending on who it is we are talking about impressing, satisfying, serving. This reality suggests that the diversity usually found in a clothing and textiles unit has to be harnessed, developed and marketed in a number of ways. Would it make any sense to attempt building the same image for a textile physicist, a merchandising professor, or apparel designer and a faculty member specializing in 18th century Ukrainian doll costume?

What does make sense is to carefully inventory your own skills and your unit's particular strengths and needs, then focus your image and substance building around them. Answer such questions as:

...Of what value is it to gain greater respect on my campus? What are the pay-offs?

...What do I, or what do we as a profession, have to offer to whom?

And what can we get in return for what we offer?

...What activities will bring in money and students so we can acquire still more money, quality students and reputation?

Like home economics itself, the textiles and clothing field is a diverse assortment of people and programs whose common component is supposed to be the family-oriented, holistic, integrationist-specialist framework which makes it unique. Within this framework, we should work toward a stronger image of professionalism, which I define here as efficiency combined with productivity.

IMAGE FOLLOWS BEHAVIOR. It is not possible to build a sustainable, believable image on anything except PERFORMANCE. To strengthen textiles and clothing and its professional image, with no reference to any specializations within it, we must develop specific strategies and goals for specific purposes with specific clientele.

What I am going to discuss next should not be taken as prescriptive. Rather, I shall try to present a wide-ranging view of some of the great opportunities we have to enhance the world around us, so that the T&C profession will benefit as our clientele benefit.

Education is a continuum from pre-school through the Ph.D., yet society has set up at least two, mostly unconnected, bureaucracies to handle it. State departments of education control through high school. Then, wholly separate Boards of Regents or Trustees take over. That is one major reason why textiles and clothing is a career area hardly known among high schoolers. It is why their image of home economics—based on cooking and sewing classes—differs so much from home economics and T&C specializations as they exist on university campuses. This image also
contributes to why so few males ever think of our fields as career possibilities.

Unless we make a determined effort to get the message about our career opportunities into the secondary schools, this problem will continue. That means more than simply making quick recruiting trips to various schools. Somehow, public universities need to take a leadership role in primary and secondary education so that students receive a far more complete understanding of career alternatives and educational programs that prepare people for these careers.

Because of the decline in consumer skills related to all areas of resource management—a decline usually attributed to prosperity—today’s families are woefully ignorant of even the most simple clothing selection and alteration skills. The relentless efficient marketing efforts of the fashion industry are the dominant force behind most people’s apparel and textile buying behavior. Yet, the apparel production industry is largely inefficient.

Conventional wisdom tells us that our apparel industries are rapidly dying because of cheap competition overseas. Yet, there is already a fair amount of data suggesting that the huge inflows of Hispanic and other aliens are presenting the nation with a quite unexpected and potentially very useful pool of unskilled labor willing to work for minimum wages. What effect might this have on our field? Obviously, useful university-generated research could help bring greater order and profitability to this industry, in which consumer satisfaction is significantly lacking.

Looking in an entirely different direction, consider that our field has a fair number of professionals specializing in clothing for the handicapped and elderly. While some excellent apparel designs are available through ready-to-wear (RTW) sources, not enough attention has been paid to educating this clientele that they can find the functional features needed to meet their special needs: about 85% of the elderly and handicapped could use RTW, especially action sportswear, if they only knew how to judge the design features that would accommodate their physical limitations.

Surely there are ways to disseminate this knowledge so that types and sources of efficient apparel for the handicapped will be far more widely known. An information system to "spread the word" is already available through our Extension network. Is this vital information to end up where so much other potentially useful T&C findings end up: in refereed journals used largely, it seems, as a means for those of us in the profession to talk only to each other?

Another growing area in T&C is protective clothing and melt-blown fabrics. Protective apparel has become increasingly important for military and agricultural workers who need chemical protection; for medical personnel and patients who must have bacteria-free environments; and for electronic industry technicians who need dust-free clothing. Protective clothing research offers lucrative funding opportunities in many areas.

Microfiber, melt-blown nonwoven webs open up new end uses for barrier-free apparel fabrics, as well as a growing number of industrial purposes. They present a challenge for the apparel designer in functional design for specialized end uses. As DeJonge notes in her introduction to Watkins' book, Clothing--The Portable Environment:

One of the challenging aspects of functional designing is the opportunity it provides to coordinate all elements of apparel and textiles (whether) in the design, social-psychological areas, or textiles.
Functional designing, then, is a wonderful interdisciplinary opportunity for research and teaching, as well as an integrating focus for working with business and industry. The above examples and suggestions ought to remind us that our field's potential has hardly been tapped!

Given these exciting possibilities—and there are many more—I firmly believe what we need to do to capitalize on them is to be wholly professional. That means paying more attention to the last item in the teaching, research, service triad that is our mission. I would like to see "service" defined with a much greater emphasis on professional assistance to those business groups which have the potential for developing as strong supporters of our programs.

One characteristic of the academic personality is that we prefer to do what we wish to do, and let administrators slide under the door the envelopes with the money we need to do it. But that isn't the real world, is it? We have to sell, market, and beat the bushes for attention, support, students and money. As Bea Litherland, Dean of Home Economics at Missouri, says, "Early to bed, early to rise. Work like hell, and advertise!"

No non-academic professional sits around, waiting for business. And if some professionals, like doctors and lawyers, don't actually advertise in the newspapers, you know very well that they use golf courses and civic clubs for the same purpose.

So when was the last time you had lunch with an apparel merchandiser or manufacturer? Or a furniture, carpet or textile producer? How often do you base your research on the nagging problems reported with monotonous regularity in the needle trade press?

All of us in the field of clothing and textiles have a great deal to sell. But it's all hidden—in our minds, our files, in our computers, in our journals, and sometimes in research projected or underway. Because it is hidden, it obviously doesn't show. We talk only to each other most of the time!

Light suit/dark suit, tie/no tie, attache case or purse—are only minor details because our real substance and image are based on what we, as professionals, have that others need. Although they might not yet know it!

What we have to do is sort it out, package it up—then market it to the many individuals and groups who can use it. That's good business, on campus or off. It's also a good way to develop a really powerful image.

SHAPING THE FUTURE OF OUR PROFESSION
REPORT OF THE ACPTC-CR 1984 FUTURES GROUP SESSIONS

Jacquelyn DeJonge, University of Tennessee

Shaping the future of our profession was the theme of the 1984 ACPTC-CR meeting in Knoxville, Tennessee. Seven opportunity areas identified by the ACPTC Futures Committee were the basis of workshop groups. The objective for the workshops was to identify action steps which were to be prioritized by the conference attendees. The seven areas and their workshop leaders were: National/International Scope of the Field, Mary Littrell; Technology, Joan Laughlin; Perceived Image, Barbara Stowe; Leadership, Marilyn DeLong; Program Development, Hilda Buckley; Research, Geitel Winakor; Service, Betty Feather.
The Workshop groups first generated the following goal statements and action steps:

**National/International Scope of the Field**

ACPTC-CR recommends that the national and international perspective for academic programs in textiles and clothing be strengthened through linkages with business, industry, government, and professional and trade organizations.

**Action Steps**

1. ACPTC-CR will develop a data base and network for sharing international aspects of textiles and clothing that will: evaluate current international programming within individual textiles and clothing units; survey international experiences (language, teaching, research, study) and interests of members; identify opportunities for international exchange among people, artifacts, technological developments; evaluate textile and clothing programs to attract international students. (Data Base Network)

2. ACPTC-CR will identify international problems/topics for textiles and clothing research. (Problems/Topics)

3. ACPTC-CR will establish a paid position in ACPTC for a Public Relations person/lobbyist whose responsibility is: government, business and agency contacts; placement of ACPTC members on advisory boards to business and industry. (P.R. Person)

4. ACPTC-CR will sponsor a conference for professional development on international textile and apparel trade. (Conference)

5. ACPTC-CR will establish an industry advisory board to ACPTC for futuristic dialogue on domestic and international trade (Advisory Board)

6. ACPTC-CR will disseminate information on domestic and international internships for faculty and students. (Internships)

**Technology**

ACPTC-CR recommends that new communications technologies be adapted to curriculum and methods of instruction in textiles and clothing; and that textiles and clothing professionals contribute to the technological and biotechnological developments in textiles and their application and acceptance.

**Action Steps**

1. ACPTC-CR will establish networks of people in industry, education, research and among consumers. (Networks/People)

2. ACPTC-CR will establish a network for information and technology on production of fibers, textiles, apparel, & research (Network Information)

3. ACPTC-CR will assist in the development of curriculum and instruction in technology. (Curriculum)

4. ACPTC-CR will conduct research in textile and apparel production, design, and marketing, utilizing technology and computer applications (Research)

5. ACPTC-CR will establish a Textile Fibers Network featuring Biotech fibers, and study/assist consumer acceptance of Biotech fibers (Biotech Fibers)
6. ACPTC-CR will expand members' knowledge of nontraditional textile uses, including interdisciplinary resources (people). (Non-traditional Uses)

7. ACPTC-CR will use the telecommunications revolution by establishing clearing houses, data banks, software evaluations (Telecommunicate)

Perceived Image as a Professional Field

ACPTC-CR recommends a sequential plan of action be developed which will result in a positive impact of ACPTC professional expertise on the industries, agencies, government units, etc., it purports to serve.

Action Steps.
1. ACPTC-CR will develop a list of textiles and clothing related organizations which ACPTC should join and become involved with on a planned basis (targeted organizations). (Identify Targets)
2. ACPTC-CR will establish and implement a national ACPTC speakers or consultants group for textiles and apparel businesses, industries, agencies, institutions, etc., by 1987. (Speakers Group)
Measurement. Members will report requests to Futures Committee
3. ACPTC-CR will establish an action plan with targeted textiles and apparel business, industry, agency, institution representatives which will establish ACPTC membership as a source of expertise, i.e., consultants, researchers, board members, and their graduates as employees. (ACPTC as Source)
Measurement. Reports of success will be evaluated by the Futures Committee and appointments published in the newsletter by 1988.
4. ACPTC-CR will establish an action plan which targets selected professional organizations to ensure ACPTC members achieve positions of leadership within them. Select key organizations, candidates, and campaign strategies for getting them elected. (Leadership)
Measurement. Positions of leadership held by ACPTC members by 1990.
5. ACPTC-CR will establish and promote a membership (associate) category for business, industry, government and agency membership. (Associate Membership)
6. ACPTC-CR will establish an alumni network with textiles and clothing graduates employed in business, industry, government, etc. (Alumni Network)
7. ACPTC-CR will participate in forming public policy (legislation) and develop a lobbying plan. (Public Policy)
8. ACPTC-CR will develop an action plan (manual of resource materials) to be used by campus placement units to assure employers ask to interview textiles and clothing graduates and associate them with ACPTC. (Campus Placement)
9. ACPTC-CR will hire a marketing consultant to help establish and implement a promotional campaign for ACPTC with related industries, business, etc., which informs them of what the profession can offer. (Marketing Consultant)
10. ACPTC-CR will identify current exemplary programs where textiles and clothing professionals are working with business, industry, government (Exemplary Models)
Leadership

ACPTC-CR recommends that members maximize leadership potential.

**Action Steps.**

1. ACPTC-CR will encourage members to increase participation in professional development seminars including time management, effective leadership, administrative development, etc. *(Increase Participation)*

   **Measurement.** Twenty-five percent of the ACPTC-CR membership will have participated in professional development seminars from 1985-87 as recorded in membership data collected.

2. ACPTC-CR will take leadership in developing a professional seminar. *(Professional Seminar)*

   **Measurement.** Seminar available by 1987 with 1/3 of the members attending.

3. ACPTC-CR will establish a system for nurturing individual leadership development in members of ACPTC. *(Nurturing Individual)*

   **Measurement.** Committee formed to develop a proposal to be presented at ACPTC by 1986.

4. ACPTC-CR will establish regional networks with our textiles and clothing graduates in business, industry and educational professions. *(Regional Network)*

   **Measurement.** State captain and state task force by 1985; regional networking system operational and functional by 1986.

5. ACPTC-CR will establish an ACPTC National Committee to keep members aware of public policy, and legislative, trade and standards organization actions in order to achieve greater input into the process. *(National Committee)*

   **Measurement.** Committee organized and interacting with legislative bodies by 1987.

6. ACPTC-CR members should become leaders outside the field. *(Outside Field)*

   **Measurement.** Publicizing of number of ACPTC members recently elected, appointed or recognized as leaders of other professional organizations at regional and national level through newsletter (number of requests, agencies penetrated, publications outside field).

Program Development

ACPTC-CR recommends that members of the field improve the quality of textiles and clothing programs.

**Action Steps.**

1. ACPTC-CR will encourage members to influence T&C programs to generate a more universal appeal by eliminating sex bias, and including more relevant individual related topics. *(Universal Appeal)*

2. ACPTC-CR will encourage university administration to reward interdisciplinary activities. *(Administration)*

3. ACPTC-CR will encourage T&C professionals to integrate interdisciplinary research into university courses and classes. *(Research in classes)*

4. ACPTC-CR will assist T&C professionals to develop a futuristic framework and plan for its continual evaluation by creating new linkages, new programs, and updating goals. *(Futuristic Framework)*

5. ACPTC-CR will encourage members to increase interdisciplinary research. *(Interdisciplinary Research)*

6. ACPTC-CR will develop standards for curriculum/courses. *(Standards)*
7. ACPTC-CR will encourage members to increase national/international focus by increasing ACPTC memberships, field placement, research, and exchange programs. (Increase Focus)
8. ACPTC-CR will encourage members to increase interaction with external units, including industry, community, other campus units, and government (External Units)
9. ACPTC-CR will facilitate support (networking) within the system through workshops and special interest groups. (Networking)
10. ACPTC-CR will encourage members to cross-list courses at universities (Cross List Courses)

Research

ACPTC-CR recommends that its members confer with researchers in other fields of home economics and fields outside of home economics to identify new problems for involvement as major researchers, collaborators or consultants.

Action Steps.
1. ACPTC-CR will compile a directory of membership identified by research expertise. (Directory/Research)
2. ACPTC-CR will devote issue or part of issue of CTRJ to interdisciplinary research co-authored by people in other fields. (Issue)
3. ACPTC-CR will organize forums or workshops (within university) to report on interdisciplinary research. (University Forums)
4. ACPTC-CR will hold subject matter group meetings to identify interdisciplinary problems. (Identify Interdisciplinary Problems)
5. ACPTC-CR will provide opportunities at its conferences for panels presented by researchers who do interdisciplinary research. (Conference Panel)
6. ACPTC-CR will sponsor a workshop on grantsmanship and sources of available funding. (Funding Workshop)
7. ACPTC-CR will develop and hold a competition for interdisciplinary papers (award academic or with industry/business). (Competition)
8. ACPTC-CR will sponsor an interdisciplinary research conference. (Interdisciplinary Conference)
9. ACPTC-CR will create a traveling lecture fund for interdisciplinary speakers. (Lecture Fund)

Service

ACPTC-CR recommends that its members initiate a plan of service to consumers, business, and industry which would place textiles and clothing professionals in an active change agent position.

Action Steps.
1. ACPTC-CR will identify a broad base of national key priority audiences to be reached in an action plan of service. (Broad Base Priority Audience)

Measurement. Listing of key audiences for years 1985-1990 presented at the conclusion of the 1984 ACPTC-CR meeting; organization plan for networking with key audiences.
2. ACPTC-CR will plan a major membership drive (via state members) to invite professionals who are involved with textiles and clothing in education, industry, business and/or political arenas. (Membership Drive)

Measurement. Membership growth and diversity of members.
3. ACPTC-CR will increase involvement in public policy both at state and national levels. (Public Policy)

Measurement. Number of members involved in public policy; efforts reported in publications and changed policy.

4. ACPTC-CR will plan and conduct a research and service workshop in 1986 to increase interaction between business and industry with academic researchers for the ultimate purpose of identifying research areas that are needed in the field. (Research/Service Workshops)

Measurement. The number of research projects started from the workshop by 1989 and the actual dissemination of research findings to the field by 1992.

The above action steps were prioritized within each workshop group and the top ranking steps from all groups were then prioritized by the total conference participants. The following list of prioritized action steps represents the opportunity areas the CR Futures Committee will use as the basis for a plan of work to help shape the future of our profession.

Prioritized Action Steps from all Opportunity Areas

1. ACPTC-CR will assist T&C professionals to develop a futuristic framework, and plan for its continual evaluation by creating new linkages, new programs and updating goals. (Futuristic Framework)

2. ACPTC-CR will develop an action plan for targeted textiles and apparel businesses, industries, agencies, and institutions which will establish ACPTC members as sources of expertise, i.e., consultants, researchers, board members, and their graduates as employees. (ACPTC-CR as Source)

3. ACPTC-CR will develop a data base and network for sharing international aspects of textiles and clothing that will: evaluate current international programming within individual textile and clothing units; survey international experiences (language, teaching, research, study) and interests of members; identify opportunities for international exchange of people, artifacts, technological developments; evaluate textile and clothing programs to attract international students. (Data Base Network)

4. ACPTC-CR will use the telecommunications revolution by establishing clearing houses, data banks, software evaluation. (Telecommunications)

5. ACPTC-CR will conduct research in textile and apparel production, design and marketing, using technology and computer applications. (Research in Production)

6. ACPTC-CR will hold subject matter group meetings to identify interdisciplinary problems. (Identify Interdisciplinary Problems)

7. ACPTC-CR will identify a broad base of national key priority audiences to be reached in an action plan of service. (Broad Base Audience)

8. ACPTC-CR will encourage members to increase participation in professional development seminars including time management, effective leadership, administrative development, etc. (Increase Participation)

9. ACPTC-CR will increase involvement in public policy both at state and national levels. (Public Policy)

10. ACPTC-CR will establish a system for nurturing individual leadership development in members of ACPTC. (Nurturing Individual)

11. ACPTC-CR will sponsor a conference for professional development on international textile and apparel trade. (Conference)
12. ACPTC-CR will hire a marketing consultant to help establish and implement a promotional campaign for ACPTC with related industries, business, etc., which informs them of what the profession can offer. (Marketing Consultant)

13. ACPTC-CR will provide opportunities at its conferences for panels presented by researchers who do interdisciplinary research. (Conference Panels)

14. ACPTC-CR will develop standards for curriculum/courses. (Standards)

PANEL: TECHNOLOGY & ITS EFFECT ON OUR FIELD

COMPUTER PRODUCTION OF CUSTOM FITTED GarMENTS

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Technological advances are having a major impact on the field of textiles and clothing. We should take the opportunity to use the new tools technological change has provided to shape future growth of technology in the field of textiles and clothing. An area in which we are uniquely prepared to make contributions is the development of automated garment production. Over the past fifteen years, there have been numerous predictions that automated production of custom fitted clothing will be developed in the foreseeable future. Computerized control of pattern design, grading and cutting have brought these predictions closer to reality. However, a large gap in our present technology remains; custom fitting a garment is a highly skilled art that cannot be successfully automated in its present form. The process of custom fitting must be reformulated; algorithms that are compatible with computer processing must be developed. Since home economists have retained skills in individual fitting of garments no longer used in the ready-to-wear industry, we are the logical ones to develop new algorithms for computer processing.

Several computerized fitting systems have already been developed; however, the majority of the systems are simply traditional drafting or alterations systems that have been encoded. In the process of encoding these systems, the intuition of the human pattern maker is lost, and the real power of the computer is not utilized. New algorithms should replace the intuition of the pattern maker with the power of the computer to process large amounts of data.

In developing new algorithms the successes and failures of currently used manual systems should be examined. Draping is presently the most accurate method of producing a custom fitted pattern. The accuracy of a draped pattern can be attributed to the process of forming the three-dimensional garment with fabric in relationship to the body, and then flattening the three-dimensional garment to produce a two-dimensional pattern. Drafting and pattern alteration methods generally produce patterns that do not fit as well as draped patterns. This lack of fit can be attributed to the incomplete representation of the body that is used in these methods, and to the fact that fabric is not used in the pattern making process.

From these considerations, proposed here is a conceptual framework for a methodology for producing custom fitted garment patterns. It includes three major parts: 1) complete and unambiguous specification of the body form; 2) formation of a quantitative three-dimensional model of the garment as a function of the body form; and 3) flattening of the three-dimensional
model of the garment to produce two-dimensional patterns. Steps 2 and 3 should include parameters for fabric characteristics.

Technological advances have provided several methods for rapidly and accurately specifying three-dimensional coordinates for any point on the body. The capability of the computer to process the large amounts of data these new measuring systems generate make it feasible to consider their use in producing custom fitted patterns.

Only two references were found for research that used three-dimensional data to generate patterns. Bourachkov (1972) produced a pattern for a "second skin" by flattening the surface of the body, but he produced no patterns for real garments (the form of a garment is nearly always different from the form of the body). Appel and Stein (1978) produced a bodice pattern by modeling the three-dimensional form of the bodice as a series of polygons, and then projecting the polygons onto a planar surface. Constraints Appel and Stein placed on their polygons precluded approximating the curved shape of a bodice very closely. Neither Bourachkov nor Appel and Stein incorporated fabric parameters into their flattening procedures.

A preliminary solution was proposed for each part of the framework outlined above. These solutions were:

1. The area of the body to be fitted was specified with a grid of three-dimensional polar coordinates spaced in approximately 2 cm. intervals over the surface of the body.
2. The three-dimensional curved form of the garment to be produced was modeled as a function of the body form. This model will be referred to as a "last."
3. The "last" was approximated and projected onto a planar surface using quadrilaterals about 2 cm. square. The quadrilaterals were combined to form a pattern using a process called pseudo-shearing. Pseudo-shearing was designed to model shearing in a woven fabric. These solutions were tested by using them to produce a basic skirt pattern. The skirt that was produced seemed to fit fairly well except there was a small bulge in the side seam just above the hip line. It was hypothesized that this distortion of the pattern was caused by pseudo-shearing; pseudo-shearing does not perfectly model shearing in woven fabrics. At this time the flattening procedure is being refined to more closely model the mechanisms of woven fabric.

In conclusion, there is still much work to be done before automated custom fitting will be a reality. The mechanisms that allow flat fabrics to conform to three-dimensional surfaces must be investigated further, and the relationship between other types of garments and the body must be quantitatively defined.

References.


Clothing purchases are assumed to be high-involvement decisions because they can affect one’s self image. Engel and Blackwell (1982) defined five steps in the high-involvement decision-making process. These are problem recognition, information search, alternative evaluation, choice, and outcome (presumably satisfaction or dissatisfaction).

Extension staff in home economics have used many methods to distribute information to clientele to aid decision making. Computer technology allows educators to deliver information tailored to learners’ needs. Through a grant obtained from the Extension Service of USDA this project originally titled A Computer Assisted Learning Approach to Consumer Decision Making was begun to test the computer as a means of information delivery.

The objects of the project were to 1) develop a format for computer software in home economics which would assist consumers in the decision-making process, 2) develop a computer software package to deliver consumer clothing information to youth and adults, and 3) evaluate the use of this computer clothing information package to assist clientele in decision making in a point-of-purchase setting.

A review of literature on consumer decision-making theory, clothing merchandise categories, and mail order catalogs was conducted to determine categories to include in the program. Current clothing market information was gathered by advanced clothing consumption class members. A format was developed for an interactive computer software package written in Business BASIC for an Apple III. The format allows computer users to obtain a personalized printout of information selected from 12 performance characteristics and 12 clothing categories for seven age/sex groups.

The 12 performance categories were care, classic style, color, colorfastness, current fashion, durability, fit, low cost, quality, safety, soft texture, and warmth. The 12 major clothing categories identified were active sportswear, blouses/shirts, coats, coveralls, dresses, nightwear, pants, shoes, clothing for special needs, suits/separates, sweaters, and underwear. A varying number of sub-categories within each was determined. For example, within the coveralls category, sub-categories included flame resistant, insulated, play/leisurewear, snowsuits, water resistant, and worksuits. Nondirective data statements were written for each of these sub-categories and specific information to assist decision making was input for male and female adults, teens, schoolagers, and preschool children. A Consumer Clothing Information Request Form was designed to record user choices and addresses for follow-up mailings. Both technical and user documentation were written. Inservice education was conducted for field staff to assist them in learning to use the computer and the software package.

Three Extension Home Economists cooperated in field testing the software package What are you Shopping for Today? Part 1: Consumer Clothing Information in shopping malls. They agreed to be the source of further information listed at the end of the user's printout and to provide subjective evaluation of this approach. Field tests were conducted in Cedar Rapids, Council Bluffs, and West Des Moines, Iowa.

Two weeks after each field test a questionnaire was mailed from the state Textiles and Clothing Extension Office to consumers who had received
a printout. Of the 132 questionnaires mailed, 56 were completed and returned. Although the return rate was low, a majority (60%) of those responding had not received information from Extension previously, and 73% rated the program from good to excellent. Over 80% liked receiving information from a computer. Those responding ranged in age from 8 to 68 years of age and the majority were employed full- or part-time.

Information on the computer printout was helpful to these consumers as they made clothing decisions. The following percentages of respondents agreed that the information helped them 1) make clothing decisions (64%), 2) avoid clothing problems (70%), 3) get better value for the clothing dollar (63%), and 4) save money on clothes (36%).

Extension Home Economists had mixed reactions. They felt the program itself was easy to use, but that the computer hardware was difficult to move, set up, and operate. Some staff seemed reluctant to trust computers to perform as needed in front of an audience. Staff from counties without malls were uncertain whether they had a need for the program, regardless of attempts to point out other appropriate sites for program use.

Some Extension field staff were enthusiastic about this program because it reached new clientele from a variety of age groups and because it provided information needed at time of purchase. An area consumer management specialist who assisted with the field tests said: "After using the program, I would say that it reached a young clientele group--youth, older youth, and young adults--which we reach in no other way. It gives them computer information at the time of purchase and they are not people who will write for a fact sheet or delay purchases before they get more information. The program also introduced computers to some middle aged and older persons who were not familiar with them."

In the year since the field tests, staff have used the program successfully for 4-H clothing selection events, in meetings in county offices and to generate printouts on specific topics to take to meetings at locations without a computer.

In terms of original objectives, a format which may be useful for delivery of other forms of consumer information in home economics has been developed. A second software package What Are You Shopping for Today? Part 2: Household Textiles using a similar format is nearly completed.

Computer assisted learning approaches seem to be effective in delivering consumer information. Potential uses for this program include retail stores, 4-H meetings, and Extension offices. The cost of hardware and program modification for other computers may be a deterrent to the adoption of this software by other states. However, the data base may serve as a source of information for fact sheets and news releases to reach consumers in more traditional ways. In order for Extension field staff to adopt computer-assisted learning approaches, a series of educational experiences and an on-going support system is necessary. Computers appear to be a useful addition to our program delivery systems in Extension, but a balance of methods including the more traditional ones such as printed materials, slide presentations, and media will be necessary to effectively reach Extension audiences in the future.

Reference.
The computer has an important role in the functioning of a retail business. Students preparing for careers in the retailing industry must become computer literate. They should be given the opportunity to interact with and use the computer in situations representative of those they will face on the job.

Two computer simulations representative of existing retail store management applications were developed. Prior to development, selected retailers were surveyed to determine management functions they performed using a computer or computer-generated information. Based on this data, the six-month planning function and the unit and dollar control function were chosen for simulation. A flowchart for each simulation was developed to model the two management functions and to formalize the sequence of events. The simulations were written in the BASIC language for use on the Digital Equipment Corporation VAX 11/780 mini-computer.

The six-month planning simulation allows students to manipulate a given set of data with the goal of generating an optimal six-month plan. Students are given a listing of the store management's expectations for the department in the form of management criteria. Projected dollar sales, end of the month inventory dollars, reduction dollars, beginning of the month dollars, planned purchases and gross margin projections are presented on the terminal screen. Students review projections and make changes as needed. When the student is confident that an optimal plan has been generated he/she may submit the plan for management comments. The computer then evaluates the plan based on specific management criteria. If the plan is correct a message appears on the terminal screen to congratulate the student. If the plan is not correct, problem areas are identified for the student. The student may make further changes and resubmit the plan for management comments.

The unit and dollar control simulation allows students to monitor sales and stock levels in an on-going department. Students are required to select appropriate data to aid them in analyzing the sales and stock status of several merchandise classifications. Three screen formats are used to allow students to view stock and sales conditions from different perspectives. Information is available in both a summarized form and a very detailed form. The video screen provides a sales and stock analysis by style, a sales and stock analysis by style, size, and color and an open-to-buy analysis. After analyzing the data, students are allowed to enter decisions which could alter sales and stock levels. Following the students' input, a merchandise demand figure is generated and stock and sales levels are adjusted accordingly.
The purpose of this study is to understand the significance of female appearance among the Kalabari Ijo of the Niger Delta of Nigeria throughout the process of the iria tradition, a tradition that celebrates the periods of transition in the female life cycle from late childhood through childbirth. During these periods of prescribed behavior, the stages of becoming a woman are acknowledged by incorporating recognizable, characteristic forms of dress and body modifications in the ritual activities associated with iria. These forms communicate socially significant themes in Kalabari life that render female appearance meaningful for a community and reinforce cultural patterns of behavior.

The primary objective of this study was to document Kalabari female appearance throughout the stages of developing womanhood. Four objectives were, therefore, established to understand the significance of dress and the tradition of iria within Kalabari culture.

The research study included fieldwork experience of four months residence in the town of Abonnema, Nigeria, from mid-June to September, and the month of December in 1982. The major methods used to collect visual, verbal and written data that provided the material for the study included photographic documentation, informal interviewing techniques and participant observation.

The analysis derived from assuming a theory of culture and using an explanatory model originating with the Kalabari. Three dominant themes emerged from the overview of the Kalabari and the tradition of iria that help explain the relationship of female appearance and its meaning in human behavior. These themes underscored the importance of family and lineage continuity, economic and political power, and the traditional religious belief system.

This study has significance because it focuses on the practical problems associated with female appearance that the Kalabari, as individual members within the extended family structure and as lineage groups, encounter in daily living. It contributes to cross-cultural research by 1) documenting those problems associated with women's experiences and perceptions as they progress through the culturally defined stages of the female life cycle within the context of the extended family and lineage system of the Kalabari, 2) adding to the previously overlooked area of Kalabari material culture including the use of textile and clothing products as a topic of study, and 3) focusing on the successive periods of transition and the study of practical problems within the sub-area of clothing and human behavior.
Fashion is recognized as a dynamic process which brings cohesiveness in an achieving society and expresses its move toward modernity. India qualifies as an achieving society based on indicators of social change such as increasing number and type of media, increasing number of college women, improving standard of living, increasing use of advanced technology, and increasing urbanization.

A review of literature regarding the fashion process indicated a relationship between fashion leadership and attitudes toward change. Leaders were reported to have more positive attitudes toward change and greater willingness to take risks than were nonleaders. However, no study of fashion leadership and attitudes toward change was reported using an Indian sample. Therefore, one of the purposes of this study was to examine the concept of fashion opinion leadership among college women in India by assessing attitudes toward change among leaders and nonleaders.

Diffusion and adoption of innovations provided the theoretical framework. Separate sample pretest/posttest design was used for the investigation. The measure for fashion opinion leadership was adapted from Polegato and Wall's (1980) measure and the attitude toward change measure was developed by the researcher. The instruments yielded reliabilities of .69 and .80 respectively using Bohrnstedt and Heise's Omega.

The sample was comprised of 509 college women from four universities in northwestern India. Based on Summer's study (1970), 35.4 percent of the respondents represented fashion leaders and 64.5 percent nonleaders. The hypothesis was tested using analysis of variance and factor analysis was used to determine the unidimensionality of the attitude measure.

Findings revealed that fashion opinion leaders exhibited significantly more positive attitudes both in extent and variety than did fashion nonopinion leaders. Specifically, the two groups differed significantly on eight of the fourteen items indicated on the measure. Differentiating items included 1) respondents' agreeing more with their mothers who encouraged discussion of fashion, 2) preferring fashionable hair styles, 3) opting for modern homes rather than traditional homes, 4) choosing mixed trousseaus over saris only, 5) selecting latest fashion styles, 6) watching ballet instead of traditional folk dance, 7) going to western colleges, and 8) having trips abroad. All these items involve deviation from set norms for average Indian women and risk-taking which leaders tend to do more than non-leaders. Leaders and nonleaders agreed on several items including working outside the home, belief in family planning, desire to end the dowry system, having a modern wedding, preferring photography over painting and favoring education for women.

The findings are a useful contribution to the fashion literature. Information can be used to advantage by professionals in textiles and clothing in higher education, leaders of home science colleges and the apparel industry of India. The measure of attitudes toward change could be a useful tool for studying consumer preferences and market segmentation in India.
WESTERN & NONWESTERN DRESS: A RE-EXAMINATION & A PROPOSED TYPOLOGY

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Ph.D. dissertations are an untapped resource for research about non-western dress and textiles. The study of nonwestern dress and textiles draws on several disciplines, from textiles and clothing to history, education, art history and anthropology. Forty-two representative dissertations were selected from these disciplines for analysis. A bibliography with conclusions drawn from this research is in process of publication.

As a consequence of this research, we realized the concept of "nonwestern" when applied to dress and textiles is poorly defined. A review of relevant literature reinforced this notion: the perspectives of authors of histories of western dress correspond to the philosophic and religious traditions of western civilization. The image emerges of European and Westerness with its origins, trunk (its evolution/development), and branches (its influence and spread worldwide). This historic view is incomplete because the impact of Asian and Islamic cultures, ideas, and inventions is minimized or ignored.

Judeo-Christian traditions have created a barrier between ourselves and the rest of the world. Implicitly or explicitly we have taken an "us" versus "them" attitude to the study of dress. This distinction is artificial and created by an ethnocentric bias. The distinction, in turn, limits one's understanding of dress.

Nevertheless, the western perspective has been useful in presenting concepts of style and fashion. Fashion serves as a theoretical concept that illuminates an order about change. The study of fashion in dress isolates aesthetic change over time for those people considered as Western.

We propose an alternative typology that is more value-free and less ethnocentric. This typology yields a broader, less anachronistic definition of dress, making it more workable cross-culturally. A two-by-three chart relates the element of time against scope of research. Synchronous and diachronic perspectives situate time either in the ethnographic present or along an historic continuum. Scope of research qualifies the investigator's focus along a three-step scale from specific to abstract, from research on an ethnic or social group to research on the functions of dress or the history of technology.

In conclusion, we stress our belief in the value of students continuing the study of western fashionable dress, but we emphasize that study be designed to acknowledge the comprehensive definition of dress. We feel the research typology presented is particularly important in view of the growing inter-connectedness of people worldwide.

CORRESPONDENT INFERENCE: AN EMPIRICAL APPLICATION

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Correspondent inference has been suggested as one way of understanding observer reactions to clothed appearances. This perspective concerns the effects produced by an actor's actions, and analyzes the relationship between these effects and traits inferred by others about the actor. A
basic premise of the theory is that perceivers assess an actor's intention to produce observed effects, and use this information to infer something about the actor's personality. However, only noncommon (unique) effects of an action are informative about underlying dispositions of an actor, and correspondence of inference increases as actions deviate from normative expectations. The purpose of this report is to offer an empirically based application of correspondent inference theory to explain attributions and social choices among dramatic, natural, romantic, and classic female appearance styles.

Semantic differential ratings of line drawings depicting these styles were provided by 170 male and 190 female undergraduates. Choices among these styles were measured for four hypothetical situations: an apartment clubhouse party, a cocktail party, a staff meeting and an average working day. Factor analysis was used to identify four dimensions of appearance attribution, and MANOVA indicated that differential attributions (p < .001) were made toward each appearance style on these dimensions. Z-tests indicated that specific styles were more likely (p < .001) to be chosen for certain settings, and that these choices were consistent with a correspondent inference interpretation.

A choice circle analysis was constructed to designate effects (ratings on identified dimensions) produced by each appearance style as follows:

![Choice Circle Diagram]

Effects:  
- a = nontraditional  
- b = traditional  
- c = sociable  
- d = unsociable  
- e = formal  
- f = informal  
- g = submissive  
- h = dominant

 Considering all four alternatives, correspondent inferences can be made for natural, romantic, and classic choices: they have informal (f), submissive (g), and unsociable (d) noncommon effects, respectively. The most frequent choices in each situation (clubhouse party, dramatic or romantic; staff meeting, classic; and average working day, natural or classic) did not provide unique information about an actor. However, out-of-role behavior did. For example, a classic suit for the staff meeting was normatively expected; most (91%) chose this style despite unsociable connotations. However, less frequent selections of informal natural attire (8%) were interpreted to reflect a practical, easy-going orientation toward the work role. A similar line of interpretation was followed for choices in other situations.

Correspondent inference provided an avenue to interpret empirical data for social perception and choice. We suggest that precise formulations of the theory should be tested by measuring attributions in specific situational contexts. These avenues of investigation should contribute to an integrative theory for directing psychosocial research.
CLASSIFICATION OF INFORMATION Communicated Through Dress

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Previous research of person perception and dress has incorporated a wide array of measurement items with little consideration of relationships among items. The objective of the present study was to find consistent themes among findings of research on person perception and dress.

Sources of data were 45 published and 12 unpublished person perception studies which incorporated some type of experimental manipulation of dress. Only findings acquired through questionnaire measures of perceptions were analyzed. A content categorization system was tailor-made to fit the findings; the categories were modeled after dimensions identified in previous multivariate person and relational perception research. Significant (p < .05) main and interactive effects from 55 studies could be categorized according to the content system. Findings included inferences about traits, abilities, behaviors, relationships, moods, attitudes, and life-style characteristics of stimulus persons based on dress.

Four superordinate categories incorporated 493 findings. Each category was divided into three subdivisions:

1. Evaluation--positive/negative evaluation component of person and relational perception.
   a. Character--moral qualities such as honesty, fairness and responsibility.
   b. Sociability--stimulus person's orientation to others; judgments of likeability and attractiveness as a friend.
   c. Moods--feelings attributed to the target person.

2. Potency--achievements, relational power, and physical strength
   a. Power--relational and physical power; dominance and assertiveness.
   b. Competence--inferences about capabilities and prestige.
   c. Intelligence--knowledgeability; level of education achieved.

3. Dynamism--diverse "activity" component of person perception.
   a. Activity--general tendency toward activity; intensity of involvement in a situation or relationship.
   b. Control--degree of control over the self.
   c. Stimulation--provocative and stimulatory properties of the target person; novelty of the person.

4. Quality of Thought--inferences about belief structures and mode of thinking or expression based on dress of the stimulus person.
   a. Flexibility--degree of freedom in thinking and problem-solving versus tendency toward conformity and conservatism.
   b. Objectivity--logical versus intuitive; idealistic versus realistic.
   c. Tangibility--abstractness versus concreteness; vagueness versus clarity of ideas or expression.

The classification of 493 inferences within four general themes indicates underlying similarities across findings of previous research on dress and social perception. The parsimonious dimensions could facilitate development of instruments for further research. In addition, the themes may provide theoretical direction for research on dress as nonverbal communication and serve as a framework for interpretation of findings. Stronger theoretical focus is needed to increase the scientific importance of the study of dress in human interactions and to clarify the contribution of dress to the general field of person perception.
PRODUCT SCHEMAS IN PERCEPTION OF AN APPAREL PRODUCT

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How a consumer responds to any given product is a result of her/his perception and evaluation of that product. A consumer's perceptual interpretation is guided by personal mental schema. Past experience with a product gives the consumer an opportunity to develop a schema. This schema guides subsequent experience with that product because the consumer has come to expect certain product configurations.

Product schemas are loose configurations, mentally present as coded representations of product attributes, categories and usage situations, as well as evaluations and choice guides. The nature of this product schema is the focus of this study. The objective was to explore how a group of subjects responded to a product (sweaters), and to infer from their responses the nature of their product schema.

Twenty-five sweaters were selected for the study based on 20 visual, tactile, and kinesthetic attributes. Subjects were 60 students between the ages of 18 and 25 enrolled in university-level courses. In the first session subjects described their conceptions of a sweater. The second session consisted of ranking and grouping tasks completed by each subject individually. Each subject physically placed sweaters in three separate rankings, according to like, warm, and fashionable. Grouping tasks included placing sweaters into categories according to situation of use. After each task, subjects provided comments and reasons for their choices.

Mean responses to the rankings of like, warm and fashion were used to develop a profile. The profile established a separation of the ranking of sweaters for warmth. Like and fashion responses have been found to be similar in studies where apparel ensembles were used as stimuli. When subjects were asked to group sweaters according to their own definition of situation, they used from 1 to 9 groupings based upon four themes of sweaters worn (work, school, public social leisure, and private social leisure). An analysis of variance was completed to examine the role of sweater attributes in establishing rankings for like, warm, and fashionable.

The study was useful in exploring the nature of a product schema and included how subjects would consider a sweater in relation to situation, fashion, preference and previous experiences with similar products. The effect of this product schema on actual usage is the next step in the research process.

THE INFLUENCE OF UNITED STATES-TAIWAN BILATERAL AGREEMENTS ON THE PRICES OF IMPORTED APPAREL

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As the United States and other developed countries attempt to control apparel imports from low-wage countries, the major form of import restraint is quota restrictions negotiated under the Multifiber Arrangement (MFA). Quota restrictions limit shipments in square yard equivalents (SYEs), which control volume of shipments but not the total value of imports. As a result, it is to the advantage of exporting countries to upgrade quality...
and price of products. Thus, trade restrictions on volume, but not value, have encouraged a move upward toward higher price points for apparel.

Economists generally believe that trade restrictions have an inflationary effect on prices and that lower income Americans in particular are adversely affected by quota restrictions which limit apparel goods at lower price points.

The purpose of this study was to analyze the relationship between trade bilateral agreements and the price of imported apparel. When importing countries set quotas on imports, is there a distinct increase in the price of imported apparel? The intent of this research was to determine if a significant relationship existed between the variables and to determine the nature of this relationship.

Data were collected from the Office of Textiles and Apparel at the U.S. Department of Commerce where trade data are considered to be most complete and accurate. Volume and value data of sixty-five apparel categories exported from Taiwan to the U.S. from 1974 to 1982, in accordance with trade agreements were examined in this study. The study included 527 usable observations. Data on annual quota growth rates were collected from the Taiwan Textile Federation in Washington, D.C.

The multiple regression model, containing three independent variables (the year factor, the annual quota growth rate factor, and the interaction factor of annual quota growth rate and year) was used to analyze unit prices of imported cotton, wool and man-made fiber apparel. Date adjustment procedures included system transfer, conversion of "unit of measure," value adjustment, calculation of unit prices, and utilization of annual growth rate data.

The F tests indicated there were significant relationships between the U.S./Taiwan bilateral agreement and unit prices of imported apparel. The year factor had an effect on the unit price of imported cotton, wool, and man-made fiber apparel. The annual quota growth rate factor and the interaction factor had an effect only on the unit price of imported cotton apparel.

Findings indicated that trade bilateral agreements affect prices of imported apparel. Consumers are affected by trade agreements in terms of purchasing ability and choice. Findings also have implications for manufacturers. As overseas producers have upgraded quality and price points of products, they compete more directly with U.S. products for market share. Thus, results may be useful to the U.S. industry as it attempts to improve its competitive position in world markets.

ANALYSIS OF COMPUTER USE IN RETAIL STORE MANAGEMENT
FOR DEVELOPMENT OF COMPUTER SIMULATIONS

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Researchers in the development of computer simulations have recommended a team approach whereby a subject matter specialist can work with practitioners in the field to carefully select elements in the real situation for simulation. Computer assisted management has rapidly become crucial in decision-making in the retail industry and is viewed as a key to bottom-line profit. The purposes of this study were to identify prevalent uses of the computer and computer-generated information in retail store management and to develop computer simulations based on the findings.
Forty-eight retail store buyers, assistant buyers, and managers with firms recruiting at a large southwestern university were asked to participate in the study. Participants represented large department store chains or specialty store chains. A questionnaire was developed to identify uses of the computer and computer-generated reports. Items on the questionnaire were based on findings in trade publications, from conferences with retailers in two major cities, and from conferences with clothing, textiles and merchandising faculty. The questionnaire was pretested with selected retailers in three major cities and with faculty and graduate students in clothing, textiles and merchandising.

Two types of data were gathered to identify computer use in retail store management: responses to a survey questionnaire and information from follow-up interviews with selected retailers based on survey questionnaire results. Of the 48 questionnaires distributed, a total of 34 (71%) were returned and used in the study. Data indicated that retailers used computer-generated reports more than they used computer terminals. One or more of the reports categorized under departmental sales analysis, inventory control, trend recognition, markup/markdown and profit and loss analysis were checked by 50 percent or more of the retailers. No reports categorized under promotion, vendor analysis, or personnel management were checked by more than 50 percent of the total group. Use of these reports, however, was related to position of the respondent. Approximately 50 percent of the buyers/assistant buyers checked reports categorized as promotion and vendor analysis while more than half of the managers checked personnel management reports.

Although more of the respondents used computer-generated reports than computer terminals, computer terminals were used by at least half of the respondents for some tasks. Most of these tasks were in the categories of sales analysis and inventory control.

Extensiveness of computer use by each retailer was determined by analysis of the total questionnaire. From this analysis, four retailers were selected for in-depth interviews. They provided information about on-line applications and capabilities of their computer systems and about decision making strategies based on computer-generated information. They also provided copies of their actual reports and screen images from their on-line systems.

Data from the questionnaire and interviews were used in the selection of two topics for the development of computer simulations: six-month planning and unit-and-dollar control. The simulations were used and evaluated by students in fashion merchandising and marketing classes.

Findings implied that in collaboration with retailers, computer simulations can be developed which will effectively prepare students for careers in the retail industry of the future.

CURRICULUM CHOICE AND CAREER GOALS: A STUDY OF COLLEGE WOMEN MAJORING IN FASHION MERCHANDISING AND IN BUSINESS

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Fashion merchandising is a salient area for many textile and clothing departments, and for home economics in general, due to the large number of undergraduates who currently select this major. The purpose of this study was to compare women students who major in fashion merchandising with women
students who major in business in order to determine if and how they might differ on certain dimensions.

Researchers have suggested factors influencing female curriculum and career choices are parents and socioeconomic status of the family, religious affiliation, self-esteem and educational attainment of the mother, influences of significant others and prior education and work experience.

Design of a questionnaire was based on dimensions found in the literature and included demographic information, birth order, father's and mother's work situation and educational background, size of home town, religious affiliation, high school GPA, math GPA, work experience, participation in athletics and school activities, career goals, and marriage plans. Socio-economic class was calculated indirectly. The questionnaire contained a self-concept scale, an instrument to measure sex-role orientation, a math attitude scale, and a clothing interest scale. Eighty students participated in the study, half majoring in fashion merchandising and half in the College of Business. Of the 40 business majors, 68 percent were in the marketing area.

Data were analyzed using logistic regression, which estimates the probability of an occurrence, in this case, the probability of a student choosing one of two majors based on seven independent variables. Analyses were repeated with only marketing students after an initial run which included all business students, and results were almost identical. Additionally, chi square tests were performed and correlation coefficients figured. Results indicated high school GPA was the only statistically significant factor in predicting choice of a major and math attitude was correlated with high school GPA.

Influencers on students' choices of major were also determined and percentages calculated. Self described career goals for both groups were examined and categories established. Comparison of the two groups on the two dimensions indicated there was a difference in who influenced students before they decided on a major and on ultimate career goals.

Results of the study indicated fashion merchandising students were similar to business majors in all dimensions except for high school GPA and ultimate career goals. The conclusion reached was that the image of fashion merchandising may need to be improved in order to attract students with higher GPAs.

QUALIFICATIONS FOR WOMEN IN THE TEXTILE AND APPAREL INDUSTRIES FOR MANAGEMENT POSITIONS

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College and universities are educating an increasing number of females who are potential participants for entry-level management positions. Information on qualifications women need for these positions is required for educational institutions to better prepare these students. This study focused on identifying qualifications needed for managerial positions in the textile and apparel industries. Objectives of the study were to determine: 1) educational and career background of managers with respect to current positions; 2) personal and content skills needed with different textile and apparel industries, and 3) psychological androgyny-self descriptive characteristics of managers.
Managers (n=150) from the textile and apparel industries were surveyed by means of a mailed questionnaire. Managers surveyed held positions in apparel, fabric, fiber production or fiber dyeing/finishing.

Three areas of information were collected. The first area surveyed subjects' career backgrounds seeking information identifying horizontal and vertical movement within industry, length of employment, positions held and job responsibilities. Educational background in terms of content area, personal skills and level of major emphasis of formal education formed the second area of information collected. The last area measured psychological androgyny of subjects, that is, subjects' endorsement of masculine and feminine personality characteristics. Descriptive statistics, chi-square tests, analysis of variance, and factor analysis were used to analyze the data.

More women than men had advanced degrees, primarily at the masters level in textiles and clothing/science. They tended to major in general textiles and clothing to a greater extent than in textile science or chemistry/physics/engineering as the men had done. Of the men holding advanced degrees, more were at the doctoral level in chemistry/physics/engineering. Positions in the fiber, dyeing/finishing industries required a knowledge of chemistry/physics/engineering, while positions in the apparel industry required industrial engineering and design.

No differences between men and women were found in horizontal or vertical integration of managers, level of management, time employed with the present company, nor in length of time in current position. No sex differences were found in types of tasks performed, but differences did exist by level of management, industry, and job description. Comparing types of positions held by sex, men were found to hold the following: research and development, technical service, engineer, mid-manager, and quality control. Women held the following: sales/marketing/accounting, upper management, and designer.

Writing skills were reported as most useful by managers in the fiber, dyeing/finishing industries. Time/stress/negotiation skills, business and science content areas were reported as most useful across all industries by top level management.

Managers described themselves differently when reporting on culturally perceived masculine traits. Women rated themselves higher on masculine attributes. No differences were observed in managers' self-rating on feminine attributes. This is in keeping with the perception that the ideal manager is masculine, competitive, aggressive, dominant, firm, vigorous, and rational.

Results of this study should contribute to an increased understanding of the nature of managerial performance needed at entry-level positions and assist women preparing for professional careers within the textile and apparel industries. Industry will benefit by gaining qualified persons who better fit their needs.
CLOTHING INTERESTS AND BODY CATHEXIS OF HIGH SCHOOL CHEERLEADERS

Mary Lynn Damhorst & Mary Ann Littrell
Iowa State University

Adolescents are keenly aware of appearance as a factor in popularity and success in dating. Accordingly, adolescents modify their bodies and clothing to foster and project attractive images. Cheerleaders portray an ideal of popularity and success among many American high school students. An attractive appearance is considered crucial to the cheerleader's public performance.

This research is part of a larger multi-disciplinary project to identify associations among a) anorectic and bulimic behaviors, b) body catheXis, and c) interest in clothing for high school cheerleaders. Anorectic and bulimic behaviors pose serious health threats among adolescent females. Participation in appearance-oriented activities such as cheerleading may induce intense concern about body image and a higher tendency toward anorectic and bulimic behavior. The goal of the larger project is to gain a more comprehensive understanding of anorectic and bulimic behaviors than that offered in current physiological and psychological explanations.

The purpose of this stage of the research was twofold. First, we developed a clothing interest questionnaire relevant to the clothing concerns of adolescents. Some topics thought to be particularly important to adolescents have been excluded from clothing interest instruments developed for more general populations. While useful when comparing diverse groups, general instruments may miss the richness of content appropriate for any single group. Second, we examined interest in clothing and body satisfaction together through factor analysis. To our knowledge, these topics have been factor analyzed separately in past research.

Subjects were 751 female high school cheerleaders attending cheerleading workshops at a midwestern university during summer, 1983. Participants completed a questionnaire measuring body satisfaction and interest in clothing. Items were measured on a 7-point, Likert-type scale. We used principal components analysis with orthogonal rotation to explore relationships among body satisfaction and clothing interest items.

A seven factor solution was most meaningful and explained 35 percent of the variance. The first two factors were comprised of body catheXis items: Factor 1 related to satisfaction with the face area, bust and extremities, and Factor 2, weight and waist-to-thigh areas. Factors 3 to 7 were comprised exclusively of clothing interest items related to the following themes respectively: Experimentation, Enhancement of Self-Concept, Conformity, Economy, and Modesty.

The most striking pattern among factors was the lack of a strong correlation among clothing interest and body satisfaction items. The clothing factors contained many of the new items developed for the adolescent audience and related to adolescent concerns common at their stage of development. For example, the Experimentation factor may be related to the search for adult identity. A "dressing to attract boys" item loaded strongly on the Enhancement of Self-Concept factor. Attracting boys plays a crucial role in development of female adolescent self-concept and in popularity with peers; this concern may be particularly important to cheerleaders in their public performances before peers. The Economy factor, including items related to practicality, cost, and brand name clothing, emerged as an important dimension which had not been isolated in
recent studies of college women's clothing interests. The Modesty factor focused on interest in self modesty, dressing to be sexy, and parental approval of dress; the primary focus of previous modesty measures has been concern about immodesty of others. Identification of clothing interest and body cathexis factors that provide heuristic links to theories of adolescent psychological and social development will be an important contribution to the larger multi-disciplinary project on anorectic and bulimic behaviors.

GROOMING CUES AND OCCUPATION: INFLUENCE ON PERSON PERCEPTION

Elizabeth Ann Berger & Mary Ann Littrell
Iowa State University

The perception of people varies with the culture, personality, and occupation of the person making the judgment. While occupation is of major importance to Americans, few clothing researchers have examined the influence of the occupation of the perceiver in person perception. The purpose of this research was to investigate the relationship of the occupation of perceivers and grooming of male adolescent clients to the number of person cues perceived, the type of person cues perceived, and the content of the inferences made about the client.

When occupation is of major importance in person perception research, the culture and personality of subjects should be held constant. Holland's Vocational Preference Inventory (VPI) was used to control for personality. Forty males with VPI "social scores" were selected from each of the occupations of law enforcement officer and school counselor. Participants were assumed to be members of the same broad midwestern cultural group in American society. Photographic stimuli and a questionnaire were developed for data collection. The goal was to produce stimuli that depicted realistic differences in male adolescent attire and to prepare questionnaire items that would elicit responses like those made in daily occupational situations. A panel of members of the two occupations identified that adolescent males with whom they worked differed in grooming, rather than style of clothing. Photographic stimuli were developed to depict a well groomed and a poorly groomed client seated in an office. The questionnaire contained open-ended items concerning "what you know about this person," "why the person is in your office," and "specific things noticed about the person." Descriptive data were first analyzed qualitatively using content analysis. Content categories were then submitted to loglinear analysis of the multi-way frequency tables (Occupation of Participant x Grooming of Client x Use of Inference Category). A 2 x 2 factorial analysis of variance (Occupation of Participant x Grooming of Client) was used to analyze the number of cues perceived.

There were no significant differences in the number of person cues perceived by members of either occupation or for either picture. However, counselors and law enforcement officers differed in the types of cues perceived. Counselors noted more general aspects of appearance such as body build, while law enforcement officers mentioned more specific details about clients' items of clothing. Inferences made about the client varied with the occupation of the perceiver as well as the grooming of the client. Counselors identified whether the client was in the office of his own
volition and provided details of the client's personal and vocational concerns. Law enforcement officers discussed the reputation of the client and identified the nature of the offense. The well groomed client was viewed as more affable and more inferences were made about his family. The poorly groomed client elicited descriptions about his attitude. In the only statistically significant interaction between variables, counselors wrote more about school discipline problems of the poorly groomed client.

The findings illustrate the rich content that can be gleaned from a free response format and content analysis techniques and begin to delineate the contributions to person perception of the characteristics of the perceiver versus the clothing of the perceived. Findings from studies designed to simulate daily occupational interactions may be used to alert professionals to the type of perceptions which could lead to early misjudgments in daily encounters.

CLOTHING BEHAVIOR AS RELATED TO AN AWARENESS OF THE SOCIAL IMPLICATIONS OF CLOTHING

Patricia Horridge & Lynne Richards
Texas Tech University

To determine the association between an awareness of the social implications of dress and other clothing behavior variables, the Sproles Consumer Interests and Priorities questionnaire was administered to 3,036 members of the AHEA Home Economists in Business. Resulting data were analyzed according to frequency trends, chi-square values and probability, product moment correlations, and t-test values, in order to test validity of two hypotheses: 1) that there are significant correlations between an awareness of the social ramifications of dress and the two variables of fashion awareness and clothing economic practices, and 2) that the data will produce identifiable consumer profiles, concerning fashion awareness and clothing economic practices, for individuals exhibiting either high or low awareness of the social implications of dress.

The majority of respondents were between the ages of 25 and 34 years, enjoyed family incomes ranging from $25,000 to $49,999, were married and living with their spouses, had completed a college bachelor's degree with no subsequent graduate work, and were employed full-time. When queried concerning the nature of their professions, 17 percent stated they were employed in food service, 11 percent in public relations, nine percent in sales, nine percent in energy related occupations, five percent in journalism, and less than one percent in real estate. Nineteen percent of the respondents described themselves as "home economists in business" without further elaboration.

In regard to Hypothesis I, positive correlation coefficients of at least .21 were observed between five of the fashion awareness questions and three (of the total four) social implications items. These observations suggested that: 1) a cognizance of the social applications of dress is accompanied by a pronounced interest in fashion; 2) those persons who value the expression of individuality in clothing are also substantially aware of the impact of dress upon the people around them; 3) those persons who are conscious of the social inferences of dress are also actively engaged in maintaining fashionableness of their wardrobes; and 4) those persons most conscious of the social ramifications of dress also tend to be those persons most frequently consulted about socially acceptable styles.
Also in response to Hypothesis I, positive correlation coefficients of at least \( .20 \) were observed between three of the clothing economic practices questions and all four of the social implications items. These observations suggest: 1) those persons aware of the social significance of dress define "dressing well" in terms of clothing quality, rather than garment price or stylishness; 2) those persons who are less aware of the social importance of dress place greater emphasis on clothing comfort than style; and 3) those persons who identify the significance of being "well dressed" derive enjoyment from the acquisition of clothing as well as from the use of it.

Pertaining to Hypothesis II, it was noted that those persons who exhibit substantial awareness of the social importance of dress also are most likely to notice what other people wear, maintain the fashionableness of their wardrobes, express individuality in their clothing, carefully manage their clothing budgets, avoid impulse shopping, and purchase clothing in local stores. Inversely, those persons evidencing low social awareness reveal greater concern for the physical aspects of clothing, and also exhibit a more impulsive approach to clothing acquisition.

**SELF-IMAGE/CLOTHING-IMAGE CONGRUITY AND CAREER ANCHORAGE RELATED TO CLOTHING BEHAVIOR**

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The number of women entering the labor force has steadily increased in the past decade. Clothing behavior of these women has been addressed by the popular press and some empirical research. Studies have considered relationships between the self and clothing and have taken into account various aspects of the self such as actual self-image and ideal self-image. Clothing has also been related to occupational aspirations. However, little empirical research has focused on the concept of self-image/clothing-image congruity. Self-image/clothing-image congruity has a self-concept construct which reflects the interrelationship between the actual-self and the ideal-self components of the self-concept with the product (clothing) image. Self-congruity refers to the extent a product image matches a consumer's actual self-image. Ideal-congruity refers to the extent the product image matches a person's ideal self-image. The combination of self-congruity and ideal-congruity occur as positive self-congruity, positive self-incongruity, negative self-congruity, and negative self-incongruity.

The purpose of this research was to develop a model using the theoretical concepts ideal-congruity, self-congruity and career anchorage position (defined as upwardly anchored, looking for a top level position in a firm and downwardly anchored, looking at progress already made) to predict women's clothing behavior for work.

Using the integrated self-concept theory, two hypotheses were formulated: 1) costumes which induce positive congruity will be worn more often than those which induce positive incongruity or negative congruity, followed by negative incongruity; and 2) there will be a significant relationship between congruity and career anchorage for five costumes.

A measure was developed to assess self-image/clothing-image congruity. Garment illustrations were selected which represented five distinct images (feminine, business-like, casual, sexy and collegiate) as determined by a
pretest sample. Respondents rated their ideal and actual self-images on a five point Likert-type scale in regard to each garment image. Clothing behavior was measured by respondents' answers to three questions on how often they wore each type garment to work. Career anchorage was measured on an adapted Tausky and Dubin Career Orientations Anchorage Scale.

The self-administered questionnaire was mailed to 65 faculty and 65 staff women at three land grant universities. The rate of return was 60 percent or 227 usable questionnaires.

A two-way analysis of variance was used to test the first hypothesis. Clothing behavior means for the business-like, casual, feminine, and sexy images followed the expected pattern of congruity; however, the collegiate costume did not. An aggregate analysis of all costumes supported the hypothesis that a hierarchical order of congruity conditions existed.

The second hypothesis was not supported. Congruity and career anchorage position reached a statistical level of significance, using Pearson correlations, for the business-like costume, but not for the other outfit images.

This study provided support for the theory that self-image is related to the choice of clothing for work. If the evoked clothing-image of an outfit is positively congruent with the self-image (including both the actual self and the ideal self), it will be worn most of the time. Congruity and career anchorage position were related to the business-like outfit, thereby supporting previous research that women seeking higher career levels will wear accepted business-like attire.

THE EFFECT OF FACIAL HAIR ON ASSESSMENT OF CHARACTERISTICS OF JOB APPLICANTS

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Personnel research suggests appearance factors have an important impact on evaluations of job applicants during interviews. Presence of facial hair is one appearance factor that is of concern to men as they interview for jobs. Research findings indicate bearded men are rated more positive in general than unbearded men (Pancer and Meindl, 1978; Kenny and Fletcher, 1973; Pellegrini, 1973; Freedman, 1969). These studies were conducted in the 70's using college students as subjects. Popular literature and opinions suggest clean shaven men will be judged more favorably in an interview situation. No research study has examined facial hair as an appearance factor in the interview setting using professional interviewers as subjects.

Personnel interviewers (n=150) from a major city in Texas judged a set of sketches of five men on sixteen personal and creditability characteristics, interpersonal attraction, and willingness to hire using seven point Likert scales. Three sets of sketches were varied on a facial hair dimension. In one set, five men were pictured as clean shaven. The second and third sets pictured the same men with mustaches and full beards respectively.

A principle components factor analysis was conducted on the personal and creditability characteristics. The analysis yielded three factors—Composure, Physical and Social Attractiveness, and Competency/Potency—containing items with a minimum loading of 0.5. A two-way analysis of variance (picture set x sex of subject) was conducted on each of the factor
scores. Separate two-way analyses of variance were conducted on interpersonal attraction and willingness to hire.

No significant differences were found on the factor scores or on interpersonal attraction by facial hair or by sex of subject. Differences (p=.09) were found for the willingness to hire by facial hair. Subjects indicated they were more willing to hire clean shaven men than men with beards.

From the results, it can be concluded that the presence of facial hair is not an appearance factor that influences the perception of personal and creditability characteristics or interpersonal attraction in the business environment. Verifying popular opinion, the presence of facial hair may influence the personnel interviewer's willingness to hire a job applicant. Further research now is being conducted to determine if increased physical attractiveness from the presence of facial hair for some men may affect the perception of personal and creditability characteristics.

References

FEMININE RESPONSE TO A FRONTIER ENVIRONMENT AS REFLECTED IN THE DRESS OF KANSAS WOMEN: 1854-1895

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The objectives of this study were to locate and survey 19th century prescriptive literature published in Kansas in order to search for a specific Western viewpoint as to how women should dress and to review women's personal documents for thoughts, feelings, and behavior which would reveal congruence with the prescribed norms. Twenty-five newspapers, agricultural journals, and women's periodicals were surveyed. The subject of dress was treated in a variety of ways in these publications. Poems, short stories, humorous anecdotes, and miscellaneous articles all supplied the feminine reader with models for clothing attitudes and behavior. This evidence of how society thought women should dress was compared to individual women's feelings, thoughts, and concerns about their clothing in order to reveal the pervasiveness of prescriptive standards. Information pertaining to women's feelings, attitudes, and concerns was obtained by analyzing personal documents such as diaries, letters, and reminiscences. Over 1,000 documents of this type were examined with approximately 200 yielding clothing-related remarks. These comments were grouped thematically for comparison with themes derived from public documents. They also were compared to a set of predetermined clothing values including concern for clothing conformity, physical comfort, aesthetic satisfaction, social participation, self-expression, and economy in dress. A demographic analysis of the women who wrote the personal documents revealed they were
primarily farm women who emigrated to Kansas in family units. Very few were "well-to-do," but most exhibited middle-class values.

Western literature had much in common with Eastern prescriptive literature. Advice focused on clothing and its relationship to health, beauty, religion, and patriotism. The primary aim was to temper women's interest in fashion and to point out the effect that "proper" attire would have on family life and society in general. The Western literature, however, focused more on clothing choices based on the "fitness of things." This view coincided with a greater recognition of the importance of women's physical labor and attempts to bring it in line with middle-class ideals of feminine gentility from which it usually was excluded. Thus, newspaper and journal articles not only proposed neat, becoming, modest, and economical attire, but a "common sense" approach to work clothing appropriately modified by requirements of fashion and femininity.

Personal documents revealed that women's clothing behavior and attitudes were affected by their sense of mission as civilizers of the frontier. Even though their lives were affected by increased physical labor or a lower standard of living, they still were concerned with keeping up appearances. The magnitude of their attachment to feminine ideals was revealed through their attempts to maintain feminine attire even though in numerous situations floor length skirts and other feminine apparel were difficult to reconcile with their physical environment and working conditions. Only a few women took advantage of the social isolation of the frontier to adopt less conventional styles such as Bloomers. Another, less radical garment, which met the requirements for physical comfort was the Mother Hubbard; a yoked, loose-fitting garment which sometimes was criticized because it too closely resembled intimate apparel.

In some cases poor clothing quality affected social participation; however, some women who had finer clothing refrained from wearing it because it did not conform to what others in the community were wearing. A reduced standard of living also reduced the quantity and variety of clothing; the resulting monotony failed to meet women's needs for aesthetic expression and explains why women maintained their interest in fashion even though economic conditions sometimes hindered their following fashion. In general, women exhibited economy and ingenuity in creating makeshifts and networking in order to provide for clothing needs.

MORPHOLOGICAL CHARACTERISTICS AND CHANGES IN HISTORIC FIBERS

Sara J. Kadolph, Iowa State University

Optical microscopy is a technique commonly used to identify fiber content and is recommended as a means of identifying the fiber content of historic textiles and costume. It is recognized that historic textiles and costume have experienced some degradation. Whether degradation is apparent as changes in fiber morphology occur is unknown. In addition, morphological characteristics of historic fibers have not been documented. The objectives of this study were to verify fiber contents of selected historic pieces, document morphological characteristics of historic fibers, and document changes in the morphology of historic fibers when compared to contemporary fibers.

Fibers used in this study were part of the cargo of a steamboat that sank in 1865. The cargo was entombed in an acidic mud until excavation in 1968-1969. After recovery, textile items were wet cleaned and stored in
appropriate conditions. The textile items were new, unused items; hence, morphological changes could be attributable to damage caused by burial and age.

Fibers were selected from a variety of garments and locations within garments. Natural color and dyed fibers were selected for each fiber content when available. Fibers were selected from garments found in "good" and in "poor" condition. Photomicrographs were made using an optical microscope. The photomicrographs were visually analyzed by comparison with contemporary fiber photomicrographs found in the AATCC Technical Manual (Test Method 20-1980 Fibers in Textiles: Identification).

Morphological characteristics specific to each current fiber type were found in the historic fibers. In many cases, the historic fiber was relatively easy to identify because the morphological characteristics had not been altered to any great extent. However, in a greater number of cases, the historic fibers were not as easy to identify. In some cases, fiber degradation had occurred which made fiber identification difficult. Examples of such fiber degradation included bulges and ruptures along the length of the fiber, surface cracks, splits along the fiber or at the end of the fiber, flattening of the cross sectional shape of the fiber, and irregular pits and holes along the fiber. In other cases, soil adhered to the surface of the fiber and hid identifying surface characteristics or had been trapped in the core of the fiber, thus altering the appearance. The majority of fibers studied exhibited one or more morphological changes mentioned above.

Analysis of the fiber content of historic textiles and costume is necessary to determine and follow proper conservation measures. Photomicrographs and an analysis of morphological characteristics and changes of historic fibers are beneficial in making correct fiber analyses. In addition, study of morphological changes help in determining appropriate conservation treatments and understanding fiber degradation.

DURABILITY ASPECTS OF A BORAX-BASED SMOLDER RETARDANT FINISH FOR COTTON

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Although boric acid is one of the few substances capable of retarding smolder in cellulosic upholstery textiles, it does not provide durable protection because the chemical is fugitive under conditions of moisture and elevated temperature. The use of a boric acid-based formulation which includes a crosslinking resin as a binder to hold the boric acid to the fabric has been found to be highly successful in controlling smolder combustion in heavy weight cotton fabrics. The purpose of this project was to examine the durability of the finish under extended periods of exposure to conditions of high temperature and humidity and to selected cleaning procedures.

The finish formulation consisted of borax as a source of boric acid, phosphoric acid to facilitate conversion to boric acid and a crosslinking resin binder. The finish was applied using a conventional pad-dry-cure procedure. The boric acid content of treated fabrics was determined by alkali titration of aqueous extracts. Smolder behavior was evaluated using the suggested method of the Upholstered Furniture Action Council (UFAC) for classification of smolder resistance of upholstery fabric. An
environmental chamber provided controlled conditions of temperature and humidity.

A series of initial experiments established that an add-on of three percent boric acid was required for adequate smolder protection. A solution consisting of 1.5% phosphoric acid, 3.5% resin and enough borax (9.6%) to provide a boric acid add-on of 3.5% was applied to the fabric samples. Treated fabrics were then exposed for 250 days to standard conditions (70 degrees F/65% R.H.); for 100 days to 90 degrees F/90% R.H. and for 100 days to 120 degrees F/65% R.H. Boric acid content of each sample was established immediately after application of the finish and at seven day intervals during exposure to the selected temperature/humidity conditions.

Findings were that loss of boric acid content increased as the exposure temperature increased. However, all losses were found to occur during the first 35 days of exposure. No significant decrease in boric acid content or in level of smolder protection was found in the fabrics exposed to moderate conditions of 70 degrees F/65% R.H. However, after 35 days at 90 degrees F/90% R.H., a decrease in boric acid content of approximately 25% was found in the fabrics; after 35 days at 120 degrees F/65% R.H., a decrease of approximately 40 percent was found. The decrease in boric acid content of the fabrics exposed to the more severe temperature condition was sufficient to eliminate smolder protection. The fabrics exposed to 90 degrees F retained most of their smolder resistance and were still able to pass the UFAC standard for "safe" Class I upholstery fabrics. Implication of this finding was that sufficient boric acid must be included in the initial application to compensate for losses which will occur during initial periods of exposure to high temperature/humidity conditions.

In the second phase of the study the resistance of the finish to detergent-based solvent-based cleaning procedures was examined. Fabrics cleaned with petroleum solvent and with perchloroethylene by a professional dry cleaner did not show a significant decrease in boric acid content and maintained their smolder resistance. Home cleaning methods using a foam detergent application and a liquid detergent application did not remove any of the boric acid. However, a severe cleaning procedure consisting of an all-over prespotting followed by drycleaning did destroy the treated fabric's ability to resist smolder combustion.

**EFFECTS OF WINDOW TREATMENTS IN A COLD CLIMATE**

Helen Lunde, North Dakota State University

A cooperative project between the departments of Textiles and Clothing and Agricultural Engineering was designed to study energy conserving capabilities of various window treatments under very cold (-15 degree F) simulated outdoor conditions. An insulated test chamber with double hung window and storm window was built to simulate an indoor environment. A dedicated refrigeration system was developed to provide a controlled "outside" temperature for the window wall. Temperature and humidity were controlled and monitored in both units. Effectiveness of each window treatment as a heat loss barrier was measured by comparing the treatment to the control or bare window.

Window treatments were selected in order to consider several different types of window coverings and ranged from simple inexpensive homemade treatments to more expensive custom made designs. Several combinations
were also evaluated. Cost estimates were determined for each window treatment. For comparison purposes, the unit cost was divided by the effectiveness ratings. Aesthetic acceptability and convenience were evaluated as well.

All treatments provided some reduction in heat loss, but the effectiveness of commonly used draperies was very low. Shades, shutters and blinds varied in effectiveness according to fabrication, design and edge sealing. Polyethylene films were moderately effective. A one-inch polystyrene board provided the greatest reduction in heat loss. Combinations of treatments did not result in savings equal to the sum of their parts.

A cornice at the top of the window was not an effective means of reducing heat loss. Edge sealing of treatments by magnetic strips, taping, tacking or tracks improved effectiveness.

Window treatment costs did not appear to be related to effectiveness in heat loss reduction. Aesthetic acceptability was related to management ease, light transmittance and system design. Energy savings ratings did not coincide with aesthetic ratings.

CLOTHING-RELATED AGRICULTURAL ACCIDENTS

Sara J. Kadolph, Iowa State University

Safety research has developed a conceptual model of accident causation where initiating incidents produce causal chains that lead to an event that has a number of outcomes. In order to minimize accidents and subsequent injuries, it is necessary to understand the accident event. Safety clothing is designed to interfere with the accident and minimize injury. Agricultural accidents constitute a higher percentage of reportable accidents than expected based on population figures. The role clothing plays in agricultural accidents is not known.

Objectives of this study were to learn more about agricultural accidents in order to develop safety programs, to determine the relationship of clothing to agricultural accidents in terms of frequency, severity, type of accident, time of year of the accident, and place or location on the farm of the accident, and to encourage the appropriate use of clothing to minimize accidental injury.

Approximately 3% of Iowa farm families were interviewed by trained interviewers. Each family was interviewed four times during the year regarding accidents that had occurred in the previous three months. Among those families where an accident had occurred, the interviewer recorded the responses on the appropriate form. The interview times were planned according to season and activity; winter chores and planning for the next year (winter), spring tillage and planting (spring), summer cultivation, haying, and vacation (summer), and fall harvest and tillage (fall). Forms were returned to a central location where accidents were grouped into categories for numerical analysis of totals and percents.

There were 255 agricultural accidents included in the study. Of those, 51 (20%) involved clothing. Forty-six males and five females were involved in clothing-related accidents with most accidents occurring to males aged 21 to 40 (37%). Most accidents occurred in the spring (35%), followed by winter (27%), summer (24%), and fall (14%). Most injuries (68%) were classified as severe (broken bone, cut requiring stitches, sprained back, etc.). The most common type of injury was cut requiring
stitches (41%). The hand or finger was the body part most commonly injured (61%). Agricultural machinery including tractors was the most frequent cause of accidents and injury (both 51%).

When analyzing the accident in terms of the role clothing played, it was apparent that clothing functioned in one of four ways. In 12% of the cases, clothing caused the accident. In 39% of the cases, clothing protected the individual from more severe injury. In 49% of the cases, the use of proper clothing may have resulted in less severe injury than what occurred. In 80% of the total number of reportable accidents, clothing was not involved in the accident.

In those cases where clothing was the cause of the accident, the following items were involved: shoes or boots (2); jeans (2); jacket (1); and gloves (1). In those cases where clothing protected the individual from more severe injury, the following items were involved: jeans or coveralls (10); boots or shoes (6); gloves or mittens (6); sweatshirt or jacket (2); and hat (1).

From these results, it is apparent that clothing is involved in some agricultural accidents either in terms of causing the accident or in minimizing (or having potential to minimize) injury. Use of proper clothing may minimize injury or prevent the accident. Use of improper clothing may cause an accident. If agricultural workers were aware of the importance of proper clothing, they would have more information to use in making decisions that affect their health and safety.

RESOURCE EXHIBITS

CLOTHING CONSTRUCTION VIDEO

Lois M. Gotwals, Purdue University

A clothing construction update was presented over closed circuit television to fifteen sites in Indiana, reaching 480 home economics teachers and skilled home sewers. Each participant pre-enrolled through the Purdue University Continuing Education Center and paid $10.00 for the two and one half hour session. Participants received a packet of materials when they arrived at the television site, and they had opportunity to ask questions of the presenters at designated times during the evening. Following the presentation the video tapes were made available for loan to extension agents and university staff through the Purdue Undergraduate Library Service and the state specialist's office; the viewing audience is expected to exceed 1000 people during the next two years.

Evaluation forms were included in the packets and collected at the end of the presentation. Of the 480 persons attending the televised seminar, evaluations were received and tabulated from 365 people. The evaluation was designed to give feedback on content of the presented material and effectiveness of promotional methods. The evaluation summary indicated clientele learned new construction techniques and liked the method of presentation. They commented that they were able to see construction details because the video situation presented a "needle's eye" view of techniques.

Segments covered in the program were organization of sewing tools, new tools and notions, update on current interfacings and their uses, easy zipper applications, creating and attaching sleeve puffs and shoulder pads,
attaching tailored collars using quick methods, and creating professional top stitching.

Clothing construction is a wise choice for video presentations because it permits each viewer to see on a one-on-one basis, and the presentation can be more realistic than slide/tape presentations. Video production takes as much preparation as slide/tape presentations and costs are higher. However, video presentations and tapes are currently more popular than slides, and equipment for using video tapes is becoming more available in meeting rooms and homes where extension meetings frequently occur.

The videotape was an excellent choice for the Cooperative Extension Service because it eliminated the need for large group demonstrations and it economized efforts of the specialist and clothing agents. The same reasons make video tapes feasible for college instruction. Students can view tapes when ready for the content on a tutorial basis. Preparation time is reduced once tapes are produced, because instructors do not need to prepare demonstration materials for each class. Additionally, it is a convenient method for reaching students at remote sites, saving travel time and money for those classes which involve fitting and evaluation of students' garments.

### ANALYSIS OF PROFESSIONAL SELLING IN FASHION STORES

Phyllis Ashinger, Wayne State University

The point of sale is a critical factor in determining success in merchandising. Professional salespeople, who know their products and possess strong selling skills, can turn potential "walk outs" into loyal return customers. Retailers have the golden opportunity to build loyal professionalism on the selling floor which in turn builds sales volume and promotes good will.

This resource unit uses trained merchandising students to "shop" the market to determine the degree of professionalism in area stores. Students design a formal rating sheet in conjunction with retail training departments. Possible areas to analyze include selling skills, product knowledge, and miscellaneous information. Results are tallied and compared between stores and/or different time periods.

The resource unit is applicable in any situation where there are retail stores and students who possess a basic knowledge of selling skills and product information.

Benefits of this project to students include: 1) providing the opportunity to recognize the importance and different abilities of sales people; 2) developing an awareness of benefits to consumers when knowledgeable professional salespeople are available; 3) adding relevance to text-book theory; 4) building strong personal selling skills and developing product knowledge to be used professionally or in making consumer decisions; 5) creating incentive to gain recognition for the effort involved in this project through the business community; 6) motivating class members to do strong objective evaluations leading to a meaningful professional final report; and 7) recognizing the value of a term approach to accomplish a complex project.

Benefits of this resource to participating stores include: 1) providing sales evaluation from a large number of trained objective shoppers; 2) supplying tangible criteria to evaluate the effectiveness of
Association for State and Local History (AASLH) and from recognized museums such as the Smithsonian.

Appropriate conservation methods were summarized and printed in a four-page handout provided those attending the state historic fashion show in May, 1983. Further interest led to writing a Kentucky Extension bulletin on this topic titled "Caring for Your Textile Heirlooms" (H.E. 2-707). Names and addresses of museum supply houses handling conservation supplies and a short bibliography listing textile conservation references are included in the bulletin. The following sources were particularly useful:

1. Sources for acid-free tissue paper (write for catalogs:)
   - Hollinger Corporation
     PO Box 6185
     Arlington, VA 22206
   - TALAS
     213 W. 35th St.
     New York, NY 10001
   - Light Impressions Corp.
     PO Box 940
     Rochester, NY 11101

2. Resources for Advice and/or Restoration (write for information regarding fees involved)
   - The Textile Conservation Center
     Harold Mailand, Conservator
     Merrimack Valley Textile Museum
     800 Massachusetts Ave.
     North Andover, MA 01845
   - Indianapolis Museum of Art
     Indianapolis, IN

3. Helpful References on Textile Conservation.

USING THE BERTRAND COLLECTION FOR TEACHING TEXTILE CONSERVATION

Mary Ann Littrell & Sara Kadolph
Iowa State University

On April 1, 1865, the steamboat Bertrand, enroute from St. Louis, Missouri to Ft. Benton, Montana Territory, sank at the DeSoto Bend on the Missouri River. The Bertrand remained where she sank for over 100 years. In 1968, the steamer was found in silt and clay, 28 feet below the surface. Among the artifacts were large quantities of boots and shoes, stockings, trousers, shirts, vests, frock coats, cape coats, rubber slickers, hats, sweaters, buttons, handkerchiefs, bolts of fabric, sewing notions, and
Indian trade goods. Over a period of several years, cargo items were cleaned and treated to minimize deterioration. Today the cargo of the Bertrand is stored and exhibited in a "state of the art" storage and exhibition center opened in 1981 at the DeSoto National Wildlife Refuge in western Iowa.

The excellent textile storage and exhibition facilities at DeSoto provided an ideal setting for preparation of teaching materials for textile conservation. During the 1983-84 academic year, we received an Instructional Development Grant through Iowa State University to develop textile conservation slide sets suitable for classroom instruction in textile conservation.

Three goals guided preparation of the slide set: 1) illustrate general environmental conditions, storage procedures, and exhibition methods appropriate to long-term conservation of textiles; 2) illustrate in some detail the treatment of several specific textile items in the Bertrand Collection with the hope of encouraging viewers to adopt similar creative problem solving approaches when treating textiles; and 3) illustrate the aging and degradation of 120 year old fibers.

Slides have been divided into four sets as described below. For a history of costume course, Sets A, B, and C are recommended for use in an introductory lecture on textile conservation. In a full-term textile conservation course, all sets are useful as a basis for more detailed treatment of each topic.

Set A. Historical Overview of the Bertrand. Viewers are introduced to the history of the steamboat Bertrand, its cargo and route on the Missouri River, and the fateful day of the ship's sinking in 1865. Views of excavation activities are used to introduce the concept of a "closed find" and to illustrate types and quantities of textiles on board. The brief introductory set ends by showing the exhibition facilities and Visitor's Center at DeSoto National Wildlife Refuge.

Set B. Storage. The storage set begins with discussion of temperature, humidity, and air filtering conditions recommended for textile conservation. Slides in this set illustrate a variety of flat storage techniques including lining drawers with buffered paper of pH's appropriate to the fiber content of the textile, placing tissue in fabric folds to prevent sharp creases, and support systems for three-dimensional items.

Set C. Exhibition. Procedures for conservation of textiles while on exhibition are presented, including low lighting and regular rotation of items. A variety of methods for exhibiting textiles and the Museum's unique visible storage system are also shown. Finally, compromises often made when textiles are exhibited with other artifacts are considered.

Set D. Preconservation Analysis. Photomicrographs of 120 year old wool, cotton, silk, and bast fibers with known treatment are included. These slides can be used for comparative analysis of fiber aging and degradation during preconservation analysis and provide an alternative to currently used AATCC photomicrographs of non-aged fibers.

USING CENSUS OF MANUFACTURES IN A TEXTILE ECONOMICS COURSE

Leona A. Kocher, Northern Illinois University

Published reports on the US Census of Manufactures are well suited to serve as a basis for a student project in a textile economics course. The two major objectives of the project are to provide an opportunity for the
student to investigate a fiber, textile, or apparel manufacturing industry and provide the instructor with a useful device for directing class discussion on major concepts.

In the basic format for the project each student selects an SIC 4-digit industry from the 65 manufacturing industries in the following categories: manmade fibers, textile mill products, or apparel and other textile goods. The student is directed to obtain certain information about that industry from published reports on the Census of Manufactures. In order to collect the correct data, the student must become familiar with definitions used in the Census and accurately record required information. The student must also perform certain calculations based on data collected. Information is then organized and analyzed with respect to specific questions in the assignment. A concise written report with complete citations is then submitted for evaluation.

During each class period, each student is requested to verbally provide specific information about the selected 4-digit industry to the class. Students and the instructor record this information on a master sheet as it is provided. The instructor can then use this information to guide students through an extensive discussion of results. This shared data from all major industry segments provide an excellent opportunity to point out trends in the fiber/textile/apparel industry, review basic manufacturing industry economic concepts, and discuss reasons for industry pressure on government for such things as protection from international trade, labor related issues, etc.

Merits of this project include: 1) It is flexible and adaptable to a range of class sizes, depth of coverage and time requirements; 2) Resources should be available in any college/university library that obtains government publications; 3) The project incorporates examples of many major concepts in a typical textile economics course and is extremely useful as a summarizing tool; 4) The project exposes students to a major source of data on industry and may assist students when they are asked to do industry related research; and 5) Because the student selects the industry to study, content is personalized to student desires, resulting in more meaningful study of the large quantity of numerical information in textile economics courses.

DRYCLEANING: A FABRIC CARE METHOD

Darlene Fratzke & Sara Kadolph
Iowa State University

"Drycleaning: A Fabric Care Method" is a synchronized slide/tape presentation designed to define drycleaning and proceed step-by-step through the drycleaning process from check-in to finishing. Other topics addressed during the presentation include consumer responsibilities, professional care organizations and publications, solvent and equipment used, special services provided such as leather and drapery cleaning, liability for damages, and recourse for the consumer. The set consists of 120 slides and runs about 20 minutes. Iowa State University funded the project through an Instructional Development Grant.

The authors developed this slide/tape presentation for two reasons. First, the public views drycleaning as a "black box" process and has limited understanding of techniques involved. Second, students graduating with a degree in Textiles and Clothing may be in a position to inform
consumers about care methods; therefore, they need to have some exposure to drycleaning as part of their coursework. Because transporting an entire textile class to and from a drycleaning facility is not always possible, an alternate approach was sought.

Faculty, extension personnel, and fabric care professionals were consulted to determine audience needs, to identify appropriate depth of content, and to verify accuracy of techniques shown. The project became a cooperative effort between the Iowa Fabricare Association and Iowa State University Textiles and Clothing and Media Production Departments.

The presentation has been used primarily in an introductory textile course in conjunction with a discussion of home laundering procedures. However, it has also been viewed by educators, drycleaners, and community groups and has received excellent evaluations from all audiences.

GARMENT FLAMMABILITY

Sara Kadolph & Darlene Fratzke
Iowa State University

During the 1982-83 academic year, we received an Instructional Development Grant to develop a video tape on garment flammability. The video tape is designed for an introductory level college textiles class (4 semester credits) to demonstrate flammability of garments. During the course, students do simple burn identification tests of common fibers in order to see how different fibers burn. However, fiber burn tests are done with very small swatches and reactions of a total garment to flame are often quite different.

Topics discussed in the 15 minute video tape include hazards of garment fires, types of burn injuries related to garment ignition, and factors (fiber content, fabric weight, and garment design and fit) that influence garment ignition and burning behavior. Laws and regulations regulating or setting standards for flammability of textile products are also reviewed. Methods used to assess flammability of textile products are demonstrated and compared and considerations for selecting safe garments are discussed.

The tape is beneficial to students enrolled in classes considering flame retardancy, apparel and garment safety, and clothing for special needs. Since few colleges or universities have the equipment, space or money to do full-scale burns, this tape provides those learning experiences without the expense or hazard.

SELF-CHECKING LESSONS IN CLOTHING CONSTRUCTION

Bonnie D. Belleau, Louisiana State University

This lab manual includes ten basic clothing construction techniques in an individualized, self-paced format. It is specifically designed for use in a college-level beginning clothing construction course with a laboratory. It may be used in a regular classroom situation as an introduction to clothing construction after basics such as care of the sewing machine, handling fabric, grain and cutting have been considered. In general, students require approximately three and one-half weeks to complete the manual depending on skill or experience level.
The major benefit of the manual is that it accommodates a large number of students possessing a diverse range of experience in clothing construction. Because students work through this self-contained manual on an individual basis, the instructor is free to spend more time with students who have little experience. Students with developed skills are able to work through the manual at an accelerated pace with assistance from the instructor only when necessary.

The manual has proved successful in beginning clothing construction classes and students with varying levels of expertise have provided positive feedback in favor of the individualized pace.

USE OF THE MICROCOMPUTER TO TEACH MERCHANDISE MATH

Rita C. Kean, University of Nebraska-Lincoln

The computer has been recognized as an instructional tool for learning by members of the Textiles, Clothing & Design Department at the University of Nebraska since the early 1970s. Design of the first generation of computer aided instructional packages was remedial and used mainframe computers. The purchase of microcomputers by the College of Home Economics in 1981 permitted additional opportunities to develop instructional systems using computer technology.

It was felt that upper level merchandising students needed to develop abstract thinking skills and become more familiar with the microcomputer. Software was developed to simulate problem solving experiences using the microcomputer for the study of theories and practices in merchandising. Appropriate templates were designed for use with Visicalc which reflected a planned and actual six-month merchandising plan. Students are presented with quantitative information for analysis and data entry. The framework of the assignments requires students to draw on past experiences in order to evaluate the present situation and forecast future scenarios.

Use of computer simulation experiences in merchandising courses introduces students to real world retail situations and provides opportunities to become more familiar and comfortable with computer technology. Students with retail experience can understand relationships and applications between theory and genuine situations and a vehicle is provided for students to practice problem solving and abstract thinking skills.

INTERNSHIP INTERVIEWS BIDDING & SCHEDULING SYSTEM

Sharon Hull & Ann DuPont
University of Texas-Austin

This computerized bidding and scheduling system is based on the microcomputer program dBASE II. The purpose of the system is to alleviate problems created by having too many students and stores in our internship program. Since all interviewers from stores visit campus on the same day, it is not possible for each student to interview with each store.

Students submit bids for the stores with which they wish to interview. Each student has a total of 500 points for use in bidding. Individuals can bid no more nor less than 500 points and no more than 100 points to any one store. This insures students interview with at least five stores.
The BIDDING portion of our system uses the microcomputer to compare all bids submitted for each store and to determine which students will be selected to interview for each store's internship positions. In case of several candidates bidding the same number of points for the last interview slot for a store, the program has built-in decision rules to determine which student wins the interview slot.

The SCHEDULING portion of our system handles the tedious job of matching interview times for students and stores. The program uses each store's list of winners (in order of top to lowest bidders) and matches an open store interview time with an open student interview time. Stores with more congested interviewing schedules have schedules filled first. As student schedules become crowded, stores with more flexible interview schedules are organized.

Another feature of the system is that complete store interview schedules and student interview schedules can be printed. Room locations and interviewer names can be added at a later time to schedule printouts in order to reduce confusion on interview day. The bid system allows students to more easily influence with whom interviews are obtained and eliminates scheduling two interviews at the same time. The system is flexible so new stores may be added as they are willing to work with interns and the system could be converted for use in regular placement interview scheduling.

BEGINNING TEXTILES LAB EXAM--FABRIC SWATCHES INVENTORY SYSTEM
Sharon Hull & Ardis Rewerts
University of Texas-Austin

The Exam Fabric Swatch Inventory System maintains records of fabrics currently available for use on beginning textiles lab exams. The microcomputer program dBASE II forms the basis of the system. A variety of information can be recorded about each exam fabric. Purposes of the system are to provide an accurate record-keeping method for exam swatches and to allow easy identification and retrieval of fabrics.

Certain information is entered into a data base which stores the following information about each fabric:

- fabric name
- method of fabrication
- sample ID
- quantity available
- dye/print methods
- secondary dye/print methods
- yarn structure/warp
- yarn structure/weft
- visual descriptors
- storage location
- quality ranking
- finishes
- complex yarns

Fabric swatches can be easily added or deleted from the inventory system and update capabilities allow correction of stored information such as quantity on hand, quality or location.

All stored information can be printed in various types of formats allowing easy methods to determine needs for replenishment, specify fabrics which meet an instructor's requirements for testing, and locate the fabric in storage. The major advantage of the computerized inventory system is reduction of time required to prepare laboratory exams, easier identification of fabric swatches appropriate for exams and quicker retrieval of chosen fabrics from storage.
Three different types of computer learning activities were developed for use in an undergraduate course titled Profitable Merchandising Analysis. They were:

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<th>Type of Computer Activity</th>
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<td>Computer Simulation</td>
<td>Six-month Planning</td>
<td>Mini-computer</td>
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<tr>
<td>Computer Simulation</td>
<td>Unit &amp; Dollar Control</td>
<td>Mini-computer</td>
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<tr>
<td>Tutorial</td>
<td>Markup on Cost</td>
<td>Microcomputer</td>
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<tr>
<td>Drill and Practice</td>
<td>Markup on Retail</td>
<td>Microcomputer</td>
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The Six-month Planning simulation allows students to manipulate a given set of data to generate an optimal six-month plan (including projected dollar sales, end of month inventory, reductions, beginning of month inventory, planned purchases and gross margin), and to receive management evaluation of the plan.

The Unit and Dollar Control simulation allows students to monitor sales and stock levels in an on-going department and to alter these levels to meet merchandise demand for a six-month period. Students can markdown merchandise and/or vary stock levels to determine effect of changes on total department sales.

The Markup on Cost tutorial program teaches students to calculate markup using cost as a base. Multiple choice questions were designed with distractors (answers the students would get if they worked the mathematical problems incorrectly). Each incorrect response sends students to tutorial information explaining their errors.

The Markup on Retail program teaches students to manipulate three components (markup, retail price, and cost price) through drill and practice. The student controls length of the drill and practice program.

Overall merits of the computer activities include hands-on computer experience, individualized instruction, immediate and positive feedback, and variety in the instructional setting. Specifically, the computer simulations provide decision-making opportunities and allow for critical analysis of data. Strategies can be developed over a series of attempts. Students make low risk decisions and receive harmless but informative feedback in the form of simulated consequences. The simulations represent situations students are likely to face on the job.

The tutorial and drill and practice programs provide an interactive learning experience and allow faster students or students who already know some of the material to move through rapidly. The tutorial program provides feedback on why the student had the wrong answer. The drill and practice program allows slower students and/or students who have difficulty understanding the concept to repeat similar problems until the concept is mastered.

Although a great deal of time and/or money is usually spent in developing effective computer programs, once developed they free teacher time for other productive activities. These programs developed in conjunction with selected retailers have been used with students over a period of several semesters. Models for these three types of learning experiences could be used by faculty to develop programs for use in other subject matter areas.
MICROCOMPUTER-ASSISTED INSTRUCTION ON COLOR CONCEPTS FOR APPAREL

Lucille M. Terry & Janet L. Offerjost
Bowling Green State University

Presently we are in a technological revolution which is centered around the computer. Computers are invading almost every aspect of our lives today and are one of the many possible tools which can be used in teaching. At present very little software has been developed for use in home economics curricula, especially in the clothing and textiles area. The purpose of this project was to develop a lesson using the microcomputer as an interactive device to present and teach material.

This particular microcomputer assisted instruction (MCAI) was developed for use on the Apple II or IIe microcomputer. The MCAI lesson is on color concepts as they relate to one's apparel. Concepts covered within the lesson include hue, value, intensity, color schemes, and how to select color considering one's personal characteristics, optical illusions created, and psychological effects of different colors.

The MCAI lesson contains two component parts: a diskette and a packet of visuals. The diskette was developed using an authoring language known as Apple PILOT. It contains actual instructional material and refers students to the appropriate figure in the packet of visuals. Instructional material is presented using a combination of tutorial and drill and practice modes of instruction. The packet of visuals is spiral-bound and contains 16 colored figures which illustrate such things as the color wheel, primary, secondary and tertiary colors, warm and cool colors, different values and intensities and how they are formed, and examples of color schemes.

The MCAI lesson has been used in a basic design and clothing construction class at a large university for the past three semester. Each semester, approximately 60-70 students have completed the lesson which takes about an hour to complete. Student reactions have been favorable and pre- and post-tests have shown that the MCAI lesson has been effective in increasing knowledge on concepts covered in the lesson.

Others who teach principles and elements of design might find this software useful as one tool for teaching concepts related to color. Furthermore, it is beneficial in that it exposes students to microcomputers. Information on this MCAI lesson might help others see the potential for developing other lessons using computer-assisted instruction.

FASHION OPTIONS COMPUTER PROGRAM

Bette Jo Dedic, University of Kentucky

Consumers need assistance stretching their available clothing and textile dollars and resources by selecting and planning wardrobes that meet their physical, social and psychological needs. The Fashion Options computer program analyzes the user's proportions and recommends styles, lines, textures, and colors which will look best on the user's figure. With this knowledge, users can learn to select clothing that will look good on their figures and avoid purchases that are seldom worn because they are not flattering. This program is designed for women age 25 and over.

Computations in Fashion Options are based on responses to a series of questions concerning physical characteristics of the user. The user is
first asked to enter height, weight and body frame (small, medium, large). Then the user is asked to describe the size of the following areas in relation to the rest of the body: Width of shoulders (with options of wide, average, narrow) and Bustline, Waistline, Hips, and Thighs (all with options of large, average or small). These questions separate users into one of the following figure types: top-heay, bottom-heavy, or balanced and recommends styles, lines, textures and colors that will look best on an individual's figure. Based on user's input on height, the user is asked if she would like recommendations on how to dress to appear shorter or taller. The user is then asked if she would like more information concerning weight. If the answer is "yes", then her input from questions on age, height, frame size and weight are compared with the Metropolitan Height and Weight Tables. The program responds that her weight is above, within, or less than the desired range for her size.

This program is currently being used throughout the state of Kentucky as both a leader training lesson and special interest lesson. The total learning packet includes a leader's guide, slide set, and publications.

Program participants are shown a slide set that visually describes how to dress to accent positive features and camouflage others. Participants have 30 minutes to run the program to receive an individual analysis. Due to time constraints, some agents reserve other blocks of time and schedule participants at 30 minute intervals. All participants receive the publication.

In order for the program to be effective, the user must be realistic about her figure. Many people are concerned about their appearances and are very eager to run the program. The program runs on a Hewlett Packard model 3000 or an IBM PC. For information Sheet and User's Guide, contact the author at 130 Funkhouser Building, University of Kentucky, Lexington, KY 40506.

MICROCOMPUTERS AND SMALL SEWING BUSINESSES

Beverly E. Ledwith, Michigan State University

A one-day workshop on Microcomputers and Your Small Sewing Business was developed and presented in three different Michigan locations during February, 1984 to Cooperative Extension Services audiences. Objectives of the workshop were to teach participants some computer basics applicable to small sewing businesses, present commercially prepared management software that is available for participants to use in their own businesses, help people develop criteria to evaluate software as it applies to particular business needs, test software applications with small business owners, and evaluate software programs for clarity, accuracy, and applicability to small sewing businesses.

A dummy business was established and three computer programs were evaluated and adapted to meet the management needs of this small business. A data management program was selected and adapted for filing and sorting demographics, unique characteristics, needs, orders, problems, and for performing other record keeping functions.

A word processing program to enable the user to write manuscripts, reports, correspondence, and advertising copy was selected. Data management and word processing programs were merged for producing form letters or reports.
Inventory control, pricing, record keeping, analysis, and prediction functions were explored through experimenting with a spreadsheet package. Each of the programs illustrated a different aspect of small business management.

The workshops can be used in the same format for other Cooperative Extension Service audiences, as recruitment tools for college and university programs, and for community outreach and community service purposes. Component parts can be used for teaching computer and management basics in regular college and university classes.

The workshop or its component parts can serve as a link between computer technology and clothing and textiles. Management functions demonstrated and experienced by workshop participants can serve as a foundation for other, more creative uses of technology in clothing and textiles, e.g., graphics, design, and stain removal.

The workshop uses a TRS80 Model III and is being adapted for use on the Apple and IBM microcomputers.

SEWING FOR PROFIT COMPUTER SOFTWARE

JoAnn S. Hilliker, University of Kentucky

Sewing for Profit simulates many of the decisions and problems of starting a sewing business and provides an opportunity for individuals thinking of starting a business to experience problems of small business ownership with no risk.

The program is divided into two parts: business management and people management. Business management leads the user through questions and answers that establish start-up costs, financing, monthly expenses and monthly income that result in either a profit or a loss. People management leads the user through a series of case studies related to difficult customers, relatives as customers, child care, assertiveness, and other common problems. Sewing for Profit was developed for use at seminars on home business organized by the Kentucky Cooperative Extension Service. The home sewing segment of the seminar provides factual information about starting a business. Sewing for Profit allows users to apply information from the seminar in a simulation of a small business. It makes owning a business very real since users make decisions about their own hypothetical businesses. Users may run the program several times if they wish to try different alternatives.

Sewing for Profit is useful in any teaching/learning situation examining starting and managing a sewing business. It allows users to work at an individual pace and frees the teacher for discussion of specific questions or results in a user printout.
FIBER ART/WEARABLE ART II: REPORT OF THE COMMITTEE

Robert Hillestad, University of Nebraska-Lincoln
Lynne Richards, Texas Tech University

The second national juried exhibition sponsored by ACPTC-CR titled "Fiber Art/Wearable Art II" was planned with the opening event included in the program activities of the 1984 annual conference, Knoxville, Tennessee. Site of the exhibition was the gallery space of the Tennessee Valley Authority Building across from the Quality Inn, conference headquarters in the center of Knoxville. Focus of the exhibition was on the future. To qualify, work needed to relate to the future in some specific way such as: 1) being based on the use of new or unusual materials; 2) having been executed through innovative approaches to the use of existing materials or techniques; 3) having been implemented through use of the computer or other equipment from the worlds of high tech or high touch; or 4) based on themes, concepts of philosophies related to the future such as the "new wave." The purpose of the exhibition was to feature original two- and three-dimensional fiber art and wearable art as areas of research in the study of textiles and clothing. Serving on the committee were Ardis Rewerts, University of Texas; Mary Ruth Smith, University of Houston; Otto Charles Thieme, University of Minnesota and Mary Francis Drake and Anna Jean Treece, both of the University of Tennessee. Robert Hillestad, University of Nebraska and Lynne Richards, Texas Tech University served as co-chairpersons.

Serving as jurors were Flo Barry, free-lance lecturer and designer from Houston, Texas and Richard Daehnert, practicing designer and Associate Professor, University of Tennessee. Both individuals are well known at the national level for their respective work in fiber art.

The jury selected 18 pieces from 22 entries (16 by active members, 6 by students). In addition to the juried portion of the show, Ardis Rewerts, Jan Jackson, Sharla Hoskins and the two jurors were invited to submit additional pieces to constitute the invitational component of the exhibition. The show consisted of a total of 40 pieces.

Awards of excellence were given as follows: A) Member Category: Beate Ziegert (2 pieces), Sharla Hoskins, Ardis Rewerts (2 pieces), Robert Hillestad, and Jan Jackson; B) Student Category: Margaret Warner (2 pieces) and Marilee Stang.

The show was installed by Richard Daehnert and ran from October 23 to November 2, 1984.
Call to Order

The meeting was called to order at 9:15 a.m. by the President, Marilyn DeLong, at the Quality Inn Hotel in Knoxville, Tennessee. Present were: Hilda Buckley, Kitty Dickerson, Sara Douglas, Mary Frances Drake, Betty Feather, Sandra Hutton, Laura Jolly, Karen Ketch, Mary Littrell, Ruth Marshall, Elizabeth McCullough, Esther Meacham, Lynne Richards and Geitel Winakor.

Minutes

Kitty Dickerson read minutes from February 3, 1984 Central Region Teleconference. The minutes were approved as read.

Treasurer's Annual Report

Mary Frances Drake presented the financial statement from November 1, 1983, to October 31, 1984 (attached.) As these were reviewed Drake noted that a slight overage had resulted from the Minneapolis CR meeting; although the intent is to break even, income exceeded expenses. She also noted that CR has not been billed for its portion of the 1983 Proceedings. We have been unable to determine the exact amount, but it is estimated that approximately $2,000.00 will be deducted for that expense.

Geitel Winakor suggested that in the future, for reporting purposes, we might separate out the Futures fund and the Fellowship fund. She suggested that to have these separated from the general fund would (1) help us better to determine the state of our finances and (2) that it would be beneficial regarding our IRS status. She suggested that we use a different format for our financial statement for next time. Winakor made a motion, which was seconded by Marshall, that we use this different format and separate out the Futures fund and Fellowship fund. The motion carried.

Drake noted that membership numbers are included also on the financial statement. Membership declined by about 3%, but the decline has slowed from recent years.

Drake presented the proposed CR budget for November 1, 1984 to October 31, 1985. In the discussion, Marshall noted that more funding is likely to be needed in the future for conference calls. Meacham indicated that more is likely to be needed for revision of the handbook and bylaws. Drake noted that any increases must come from additional membership or other accounts.

In April, when the organization's money market certificate matures, the Council will decide at that time whether to take funds from the CD principal (depending upon interest rates) and not from the general operating fund. It was agreed that the CD principal should not drop below $10,000.00.
IV. Committee Reports

Nominating

Lynn Richards reported that 118 ballots were returned with a very close election giving the following results:

Jacquelyn DeJonge, President-elect
Sandra Hutton, Secretary
Ann Stemm, Council Representative
Joyce Smith, Alternate to Council
Patricia Horridge, Representative to National Executive Board
Shirley Friend, Alternate to National Executive Board

Winakor reported that in the national election, Marilyn DeLong was elected President-elect and Jane Lamb elected Secretary.

Concern was expressed for the very limited number of ballots returned.

Membership

Laura Jolly reported for Janice Remmele. She noted that the committee has developed a number of strategies and plans for increasing membership. Current membership is down by 21 persons.

By-laws and Handbooks

Esther Meacham noted that no change has occurred in the national and regional bylaws this year. National bylaws have been recently updated, thus it will be time to look at CR bylaws to bring those in line with national.

Fellowship Committee

DeLong reported for Jane Farrell-Beck. Katherine Cerny from Minnesota was the recipient of this year's Fellowship. Six applicants competed for this year's Fellowship. The committee indicated concern for how the organization defines, for purpose of this Fellowship, a "Ph.D. candidate." A need exists to clarify more specifically the point at which a doctoral student is eligible.

V. Other Reports

National ACPTC Activities

Meacham reported on the resignation of the ACPTC Executive Director and the concern for publication guidelines, with more information on the latter to be presented by Winakor.

DeLong commented that many good applicants were being considered for the Executive Director's position and a decision was to be made on appointment of a new Director by November 1.

National Ad hoc Committee on Publications

Winakor distributed a summary of recommendations from the National Ad hoc Committee in which they have attempted to define policies and procedures for ACPTC publications. She noted that at present no criteria exist for
publications; none exist for the Editorial Board, and no procedure has been defined for appointment of the Clothing and Textiles Research Journal editor. The committee is also very concerned for the use of existing funds to cover costs of ACPTC publications without the consideration of means to generate additional funds.

The ad hoc Committee has been asked to write a draft of guidelines to be considered for the National Bylaws.

Winakor noted that a questionnaire to ascertain members' views regarding publications will be distributed at the CR business meeting.

Other

1. Futures efforts at state level

Betty Feather indicated that some interest had been expressed for a follow-up and continuation of the Futures statewide meetings.

2. Fiber Art/Wearable Art

DeLong read a report from R. Hillestad. He proposed a continuation of this committee on an ad hoc basis. He noted a decline in the number of entries for the 1984 Knoxville meeting, speculating that it was a decline because of difficulty in relating to the Futures conference theme. Hillestad suggested making appointments immediately for the committee so they would have ample time for organizing the next show.

VI. Old Business

Knoxville Meeting

Jacquelyn DeJonge reported that 195 persons had registered for the meeting to date. She presented a budget for the meeting (attached), noting that the committee anticipates breaking even with little or no overage. She requested that we encourage early evaluation, particularly if participants plan to leave early.

ATMI Tour

DeLong reported for Ruth Franzen. Jim Donovan of ATMI would like to determine interest in having another ATMI update tour. Positive feedback was reported from last year. DeLong noted that Franzen will report at the business meeting and survey member interest at that time.

Other

None.
VII. New Business

Expanded Activities and Special Interest Groups

DeLong shared feedback from a number of members who had asked why ACPTC is not sponsoring other conferences such as the one on psychology of fashion sponsored by New York University and another by a newly formed retailing group. DeLong indicated that many members feel we should be doing a better job of serving special interest of our members. There is a particular concern for more emphasis on retailing, particularly in view of the large student enrollment in these areas. Perhaps the organization may have to consider ongoing special interest groups within the broader organization.

1985 Program of Work

Hilda Buckley presented the proposed program of work for 1985 (attached.) Meacham moved that the Council accept this program of work; Littrell seconded the motion; and the motion passed.

Buckley presented a proposed list of committees for the coming year. She shared that the chairpersons of each of these committees have agreed to serve. Mary Littrell moved to accept the chairpersons presented as well as the proposed list of members. Drake seconded the motion. The motion passed.

Buckley presented a list of 1985 CR Conference chairpersons. Marshall moved that this list of Conference chairpersons be accepted; Elizabeth McCullough seconded. The motion passed.

Buckley requested that committee chairpersons for 1984 share their committee reports with incoming committee chairs for a smooth transition of business.

Other

Membership List

McCullough expressed a need for membership lists to be more widely available for use. Sara Douglas will explore possibilities for this next year.

VIII. Adjournment

Buckley moved adjournment of the Council; McCullough seconded; and the motion carried. The meeting was adjourned at 10:45 a.m., E.S.T.

Respectfully submitted,

Kitty Dickerson
ACPTC-CR Secretary
Financial Statement  
November 1, 1983 - October 31, 1984  
Submitted by: Mary Frances Drake, Treasurer

I. General Fund

<table>
<thead>
<tr>
<th>Budgeted</th>
<th>Receipts</th>
<th>Actual</th>
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<tbody>
<tr>
<td>$6,172.66</td>
<td>Balance brought forward Nov. 1, 1984</td>
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<tr>
<td>2,775.00</td>
<td>Membership Dues</td>
<td>1,996.00</td>
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<tr>
<td>296.12</td>
<td>Remainder of Iowa Account</td>
<td>4.41</td>
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<td></td>
<td>Scholarship and Publication Funds</td>
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<tr>
<td></td>
<td>from savings account</td>
<td>1,389.66</td>
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<tr>
<td></td>
<td>Fiber Art Exhibit Entry Fees</td>
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<tr>
<td>$9,243.78</td>
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<td>$9,717.73</td>
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Disbursements

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<table>
<thead>
<tr>
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<tr>
<td>615.00</td>
<td>President's Expenses</td>
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<tr>
<td>590.00</td>
<td>Secretary's Expenses</td>
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<tr>
<td>125.00</td>
<td>Treasurer's Expenses</td>
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<tr>
<td>175.00</td>
<td>By-Laws and Handbook Committees</td>
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<tr>
<td>75.00</td>
<td>Scholarship and Committee Expenses</td>
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<tr>
<td>650.00</td>
<td>Nominating Committee</td>
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<td>1,755.59</td>
<td>Sub-regional Future's Workshop</td>
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<td>Proceeding '82</td>
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<td>500.00</td>
<td>Conference '84</td>
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<tr>
<td>750.00</td>
<td>Fiber Art Exhibit</td>
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<tr>
<td>265.00</td>
<td>January Council Meeting (telephone)</td>
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<td></td>
<td>Futures Committee (program planning)</td>
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<td></td>
<td>National Executive Board Representative</td>
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<tr>
<td>345.00</td>
<td>Membership Committee</td>
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<tr>
<td>300.00</td>
<td>Post Conference '84</td>
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<tr>
<td>500.00</td>
<td>Newsletter</td>
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<tr>
<td>2,000.00</td>
<td>Futures Fund</td>
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<tr>
<td>398.19</td>
<td>Contingency (4.3% of disbursement)</td>
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<td>$9,243.78</td>
<td>Total Disbursements</td>
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Balance on hand, October 31, 1984 $3,402.74
II. Scholarship and Publications Fund

A. Savings Account

<table>
<thead>
<tr>
<th>Balance on hand</th>
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<tbody>
<tr>
<td>Receipts</td>
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<tr>
<td>Interest on Iowa Savings and Money Market Certificate Nov. 1, 1983-March 21, 1984</td>
<td>$433.82</td>
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<td>Interest on Tenn. Savings April 17, 1984 - Oct 31, 1984</td>
<td>35.97</td>
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<td></td>
<td>469.79</td>
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<td></td>
<td>1,451.44</td>
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Disbursements
(To General Fund through Checking Account)

| Repayment of 82-83 loan | 296.12 |
| Payment to scholarship recipient | 1,000.00 |
| Selection Committee Expenses | 93.54 |

Balance in savings account October 31, 1984 | $ 61.78 |

B. Money Market Certificate

Interest on $11,096.11 at 10.15%
April 17, 1984-October 31, 1984. | $623.71 |

Membership Statement

| Active | 280 |
| Reserve | 30 |
| Graduate Student | 44 |
| **Total** | **354** |
Eastern Region
ACPTC-ER EXECUTIVE COUNCIL

November 1, 1983 - November 10, 1984

Elizabeth Rhodes
Carol Warfield
Nadine Hackler
June Mohler
Kay Obendorf
Jo Paoletti
Judy Flynn
Barbara Starke
Jane Lamb

President
President-Elect
Secretary
Treasurer
Regional Council Member
Regional Council Member
Past-President and Archivist
Senior Member of Executive Board
National Executive Board Member

Committee Chairpersons

Jan Yeager
Lois Gurel
Jo Paoletti
Frances Duffield
Kay Obendorf
Jo Paoletti
Marie Carver
Bettie McCloskey
Jo Kallal
Carol Warfield
Elizabeth Rhodes

Local Arrangements
Hospitality
Proceedings
Evaluation
Research
Membership
Newsletter
ACPTC-ER ASTM Representative
Nomination Committee
By-Laws
Futures Committee
**ACTION FOR EXCELLENCE**

**ACPTC-ER Annual Meeting**

**November 7 - 10, 1984**

The Greenbrier  
White Sulfur Springs, West Virginia

### Wednesday, November 7

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>4:00 - 7:30</td>
<td>Registration</td>
</tr>
<tr>
<td>3:00 - 6:00</td>
<td>Board Meeting</td>
</tr>
<tr>
<td>6:00 - 7:30</td>
<td>Reception</td>
</tr>
<tr>
<td>9:00 - 10:00</td>
<td>A Slide History of the Greenbrier</td>
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</table>

### Thursday, November 8

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:30 - 10:00</td>
<td>Registration</td>
</tr>
<tr>
<td>8:45 - 9:00</td>
<td>Opening Remarks</td>
</tr>
<tr>
<td></td>
<td>Dr. E. A. Rhodes, E-R President</td>
</tr>
<tr>
<td>9:00 - 10:00</td>
<td>&quot;The Consumer of the Future&quot;</td>
</tr>
<tr>
<td></td>
<td>Presented by Barbara Price, Project Director,</td>
</tr>
<tr>
<td></td>
<td>American Council of Life Insurance</td>
</tr>
<tr>
<td>10:00 - 10:30</td>
<td>&quot;ACPTC in the Twenty-First Century&quot;</td>
</tr>
<tr>
<td></td>
<td>Presented by Dr. JoAnn Boles, Virginia Polytechnic</td>
</tr>
<tr>
<td></td>
<td>Institute and State University</td>
</tr>
<tr>
<td></td>
<td>VPI and SU</td>
</tr>
<tr>
<td>10:30 - 10:55</td>
<td>Break</td>
</tr>
<tr>
<td>11:00 - 12:15</td>
<td>Panel Discussion</td>
</tr>
<tr>
<td></td>
<td>T&amp;C Stakeholders View the Future</td>
</tr>
<tr>
<td></td>
<td>Panel Moderator: Nadine Hackler</td>
</tr>
<tr>
<td></td>
<td>Florida Cooperative Extension Service</td>
</tr>
<tr>
<td></td>
<td>Panel Members:</td>
</tr>
<tr>
<td></td>
<td>Robert Lincks, Director of Personnel Development,</td>
</tr>
<tr>
<td></td>
<td>Burlington Industries</td>
</tr>
<tr>
<td></td>
<td>Fred B. Shippee, Director of Technical Services,</td>
</tr>
<tr>
<td></td>
<td>American Apparel Manufacturers Association</td>
</tr>
<tr>
<td></td>
<td>Dorothy Choitz Foster, Buyer, Cosmetics and Fragrances,</td>
</tr>
<tr>
<td></td>
<td>J. C. Penney Co., Inc.</td>
</tr>
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</table>
2:30 - 4:15

Rotating Discussion

Textiles - The Future
(Robert Lincks)
Facilitator: Barbara K. Fuller, Winthrop College

Apparel - The Future
(Fred Shippee)
Facilitator: JoAnn Boles, Virginia Polytechnic and State University

Retailing - The Future
(Dorothy Foster)
Facilitator: Mary Barry, Auburn University

5:15 - 6:15

General Session

Textiles and Clothing - Our Future
Where to From Here?

Barbara Stowe, Dean
College of Home Economics
Kansas State University

Friday, Nov. 9
8:30 - 11:00 a.m.

Research and Innovative Teaching

Session A -- Textiles
(Presiding: Jane Lamb, University of Delaware
1. "The Role of Price and Change in Market Shares:
   A Study of Textile and Apparel Imports from the
   People's Republic of China"
   Susan B. Hester (Cornell University)
   and Lois Gurel (Virginia Polytechnic Institute and State University)

2. "The Pressure of Menswear on the Neck in Relation to Visual Performance"
   Leonora Langan and Susan M. Watkins (Cornell University)

3. "Detergency Study of the Synergistic Effect of Particulate and Oily Soil on Cotton/Polyester Fabrics"
   S. Kay Obendorf and Joan I. Jubinsky (Cornell University)

4. "An Analysis of the Proposed Standard for the Flammability of General Wearing Apparel"
   Marjory J. T. Norton (Virginia Polytechnic Institute and State University)
Session B -- Historic Costume and Textiles
(Presiding: Carolyn Joyner, University of Georgia)

1. "Dating Selected Coptic Textiles by Tandem Accelerator Mass Spectrometry"
   Lucy Sibley (Ohio State University), Douglas J. Donahue, A. J. T. Jull, and T. H. Zabel
   (University of Georgia and University of Arizona)

2. "Optical and Electron Microanalysis of Safavid Period Persian Textiles"
   Ian R. Hardin and Fran Duffield (Auburn University)

3. "The Use of Eagles as a Decorative and Symbolic Motif in 19th Century American Coverlets"
   Clarita Anderson and Jo B. Paoletti (University of Maryland)

4. "Embroidery Patterns on Greek Folk Costume of Attica"
   Linda Welters (University of Rhode Island)

Session C -- Social-Psychology
(Presiding: Lois Gurel, Virginia Polytechnic Institute and State University)

1. "The Effect of Specially Designed Garments on the Observable Make-Believe Play Behavior of Four-to-Six Year Old Females"
   Susan Davis (Virginia Polytechnic Institute and State University)

2. "Clothing and Obesity: Effects on the Perception of Personal Characteristics"
   Cynthia Bailey and Lois M. Gurel (Virginia Polytechnic Institute and State University)

3. "Situation Choices: Female Appearance Styles, Gender, and Psychological Preferences"
   Mary Ann Zentner and Sarah Sweat (Virginia Polytechnic Institute and State University)

4. "Socioeconomic and Demographic Determinants of Expenditures for Clothing-Related Services"
   Janet Wagner (University of Maryland)

Session D -- Innovative Teaching
(Presiding: Phyllis Tortora, Queens College)

1. "Promotion Campaigns for Retail Clients"
   Sandra Forsythe (University of Georgia)

2. "Teaching Commercial Apparel Production"
   Susan Weaver (Auburn University)
3. "An Innovative Approach to Teaching Fashion Illustration"
   Carol Ann Honeycutt (Virginia Polytechnic Institute and State University)

4. "Community Involvement in Clothing for Special Needs"
   Nora MacDonald (West Virginia State University)

5. "Putting Stretch into Sports"
   Nancy Breen (Syracuse University)

11:00 - 11:30

General Session

"International Trade in Textiles & Clothing Implications for the Future"
   Dr. Barbara Nordquist (Howard University)

11:30 - 12:30

Business Meeting
   E. A. Rhodes, President, ACPTC-ER

2:00 - 4:30

Computer Symposium
   (Coordinator:
    Judy Z. Flynn
    (Framingham State College)

"Computer Simulation: Fashion Retailing"
   Laura Jolly and Lynn Sisler
   (Oklahoma State University)

"Selecting and Using File Management Software for Indexes, Bibliographies and Catalogs"
   Jo Pacietti (University of Maryland)

"Computerized Stain Removal"
   Karen Kyllo (University of Vermont)

"Computer-Aided Apparel Design as an Integral Component of Apparel Design Programs"
   Jo Kallal (University of Delaware)
   and Annette Fraser (Utah State University)

"Applications of Existing Software for Textiles and Clothing"
   Carol Avery (Florida State University)

"Computer Technology or Bust: Future Directions for Clothing and Textiles"
   Suzanne Loker (University of Vermont)
5:00 - 7:30 p.m.

Juried Poster Session
Coordinator: Barbara Starke (Howard University)

"Physically Disabled Consumers' Perceptions of Selected Clothing Topics"
Jane Lamb (University of Delaware)

"Ready-to-Wear vs. Home-Produced Clothing: An Application of a Home Production Activity Model"
Suzanne Loker and Alma Owen (University of Vermont)

"Modern Design History and Fashion Merchandising"
Grant Greapentrog (Drexel University)

"Actionwear for the 80's"
Jean McLean and Susan Watkins (Cornell University)

"Microporous Fabrics: Physical Properties, Current and Future End Use"
Cynthia Mooney and Beate Ziegert (Cornell University)

"Impact of Homebased Businesses on Households: A Comparison between Clothing and Textiles Businesses and Non-Clothing and Textile Businesses"
Lillian Holloman (Howard University)

"The Relationship of Mathematical and Logical Skills to Apparel Construction and Fitting Courses"
Wanda Franz, Nora MacDonald, Pat Grocott (West Virginia University)

"Textile Conservation for Individual Collectors"
Margaret Ordonez (University of Maryland)

The "Heritage Patterns Company"
Clarita Anderson (University of Maryland)

"Fashion Mathemagic"
Nadine Hackler (Florida Extension Service)

"Computer-Aided Color Analysis"
Sue Bailey (Eve Software)

Saturday, November 10

8:00 - 10:00

General Session with Breakfast

Dr. Carol Warfield
1985-86 ACPTC-ER President
Presiding

"Where to From Here?"
Dr. June Mohler, Dean
Consumer Science and Allied Professions
Winthrop College

10:00 - 12:00

Board Meeting
CONSUMERS OF THE FUTURE: FORCES FOR CHANGE

Barbara A. Price
American Council of Life Insurance

Good Morning. It's a Pleasure to be with you this morning at your annual meeting. I have been asked to tell you something about the "Consumer of the Future." So for the next hour, I'd like to describe for you some of the demographic forces already in place today that will help mold consumers in the years ahead.

This morning I am going to focus on three major trends--ones that will have an impact on your areas of professional interest:

1. The aging of the population;
2. Trends in households and families; and
3. Employment trends in general and--specifically--women in the work force.

In trying to predict what consumers will be like five to ten years down the road, there is nothing more certain than age. This is because most of these people already have been born. And we have a fair idea--once they're born--how many will survive to a certain age.

A key trend to watch over the next several decades is the shifting age distribution of the population. Some age groups will grow considerably and some will shrink. This means that the demand for products that are designed and marketed to people of a certain age will change. And the reason why this is happening is the unprecedented shifts in American birth rates over the past half century.

SLIDE 1: Population Pyramids

Here we have what demographers call population pyramids. They are nothing more than a representation of the number of men and women, boys and girls, in different age groups of the population. Starting at the bottom of the pyramid you'll find the youngest age group 4 years and under and at the very top, the oldest, ages 75 and over. The men are on the left, women on the right. These four population pyramids show what the age and sex make-up of the U.S. population was like in 1970 and 1980 and projections are made for 1990 and 2000.

If birthrates and death rates are fairly stable over time, the population pyramids would be wide on the bottom and neatly narrow with each age group up to the top. But extreme fluctuations in birth rates during this century ruined the pyramid's ideal shape.

Look at the 1970 pyramid. The low birth rates of the 1930s created the smaller "depression cohort." Then, following almost immediately is the huge "baby boom" generation, who in 1970 were filling schools and entry-level jobs. Move on to the 1980 pyramid and at the bottom you'll find the baby bust children during the mid-1960s and the early 1970s.

Follow these three generations--the big bulge of the baby boom sandwiched by the much smaller depression-era and baby bust cohorts--through the succession of population pyramids and you can understand the pressures imposed by such demographic shifts on society in general and businesses in particular. At each different stage of life that the baby boom passes through, there are pressures on society to accommodate the huge numbers and then to constrict once again when the baby boomers move on to another stage. A general example--first the pressure was on the schools to expand, then on the labor force to provide jobs, and eventually there will be extreme burdens on our pension and social security systems.
So, the unprecedented shifts in birth rates that took place during the past five decades are the basis for the changes among different age groups that we see now and those in the future.

SLIDE 2: Age
Let's turn now to some forecasts of specific age groups. We know, for example, that the group with the largest changes during the 1980s will be the 35 to 44 year olds.

SLIDE 3: 25 to 44 Year Olds
This group will gain over one million members each year. Add to the growing number of 35 to 44 year olds the increases in 25 to 34 year olds, and by 1990 we're talking about one-third of the entire U.S. population, up from 20% in 1970.

SLIDE 4: The Aging of the Baby Boom
The baby boom youth culture is settling into middle age.

SLIDE 5: Older Population
Another segment of the population that is increasing can be found among persons 65 years and older. By 1990, they'll number 30 million, up from 25 million in 1980. Those 75 years and over will increase especially quickly between now and the end of the 20th century. They're called the "old-old" as opposed to the "young-old".

SLIDE 6: Population Under 5 Years
We also expect the number of infants and toddlers to increase during the 1980s, although not dramatically. The size of this group shrunk a bit between 1970 and 1980, but in more recent years, higher birth rates have meant that the number of young children will rise this decade. What is happening, of course, as I'm sure you are all aware, is that baby boom women are now having babies of their own.

SLIDE 7: 18 to 24 Year Olds
Just as there is good news ahead for makers of baby furniture and apparel and for products and services that are targeted to the elderly, there is bad news ahead for the makers of goods marketed to young adults. The number of persons in the 18 to 24 year old group is dropping, as you can see from this slide.

SLIDE 8: Age Recap
In sum, there are three major trends to look for in terms of the age composition of the population for the rest of the 1980s:
1. Large growth—in terms of numbers and percent—among 35 to 44 year olds;
2. Fewer teens and young adults—the result of the baby bust of the 1960s and 1970s; and
3. More older people, especially the "old-old," those 75 years and over

SLIDE 9: Households
Now I'd like to move on to the second general area of change—households and families. A household, by the way, is defined by the government as all persons who occupy a housing unit—be they related or unrelated. A household could be made up of just one person. A family—in comparison—has to contain at least two people who are related by blood or marriage.

SLIDE 10: Number of Households
The number of households has been growing more quickly than the general population. This is a trend likely to continue through the 1980s. Between 1970 and 1980, the number of households rose more than twice as fast as the general population (25% vs. 9%). The number of households grew from 53 million to 80 million during that time. This was due largely to
the tremendous increase in the number of households comprised of persons living alone or a group of people--unrelated--who are living together. By 1990, the number of households could reach 97 million.

SLIDE 11: Nonfamily Households--Number

The number of "nonfamily households"--persons living alone or with nonrelatives--grew a tremendous 73% during the 1970s, from 12.5 million to 21.5 million households. Why such a high jump? In part this trend can be traced to the baby boom, many of whom arrived at household forming ages during this time. Also, there was an increased tendency for young adults to move away from their parents at an earlier age and to postpone marriage. An increasing number of divorced persons and more older persons living alone also contributed to the growth in nonfamily households.

SLIDE 12: Proportion of Households Comprised of Nonfamilies

The rise in nonfamily households is likely to continue in the 1980s--still outdistancing general population growth--but not at such a high pace as during the 1970s. By 1990, it is estimated that 31% of all households will be nonfamilies, compared to 26% in 1980.

SLIDE 13: American Families

What about American families? Are they really on the way out? Well, judging from both the attitudes of young people today and from the sheer numbers of families, it is evident that we are not about to give up on the institution of the family.

SLIDE 14: Number of Families

In the 1970s, the U.S. gained 8 million families. And between 1980 and 1990, the number is expected to increase by 11 million, to 70 million.

SLIDE 15: American Families as a Percent of Households

But even though there are more and more families, they are making up a smaller and smaller percentage of all households, because other types of households are growing more quickly. In 1970 there were families in 8 out of 10 households. We expect them to be in less than 7 out of every 10 by 1990.

SLIDE 16: Percent of Households with Married Couples

A significant development of the 1970s was the drop in the share of households with married couples--from 70% of all households in 1970 to 62% in 1979. Nonetheless, the married-couple household will still be the most popular type of living arrangement in 1990. If current trends continue, however, it will make up a smaller share of households in the future--perhaps down to 55% by 1990.

SLIDE 17: Single Parent Families

No discussion of families is complete without reference to the important development over the last decade among single parent families. The number of one-parent families rose from 6.9 million in 1970 to 10.5 million in 1980. The growth was almost entirely among families headed by women. As you can see, the increase in single parent homes is expected to continue through the 1980s.

SLIDE 18: Household Recap

The key demographic trends to look for with respect to households and families are:

1. A continued expansion in the number of households--outpacing growth of general population;
2. A smaller share of households will be made up of married couples; a longer share of single-parent families; and
3. A larger share will be persons living alone or those living with persons who aren't relatives.
The last area I want to cover this morning is trends in employment. And woven deeply into this is the changing role of women.

Two phenomena converged in the 1970s which fueled a tremendous growth in the labor force:

1. Baby boomers began graduating from high school and college and started looking for jobs; and
2. Women entered the work force in droves. As a result, there was a growth spurt in the labor force during the 1970s. Between 1970 and 1980, 22 million people were added to the labor market—a gain of 27%.

But no one expects the 1980s to show such a large gain. The baby bust children born during the 1960s and 1970s are developing into a smaller pool of entry-level workers in the 1980s than baby boomers did in the 1970s. The bottom line, say labor experts, is that the 1980s will see an overall slowing in the growth of the labor force. And some industries may experience labor shortages. Add to this mounting pressures to stem the tide of illegal immigrants (foreign workers) and alarm should start sounding for management in garment industries and hotel services. Where are the workers going to come from?

However, the influx of women into the work force continues unabated. During the 1970s, 57 of every 100 additions to the labor force were women. Between 1980 and 1983, women represented 65 of every 100 additions. Today, over half (53%) of American women 16 years and older are in the labor force in full- or part-time jobs.

In 1970, women made up 38% of all U.S. workers. By 1990, that proportion may approach 50%.

Some social observers have dubbed it "the subtle revolution". Others cite it as the single most outstanding phenomenon of our century. Clearly, the movement of women into the labor force has had an enormous impact on society. This is old news by now—the story of the 1970s. The story of the 1980s involves working mothers and the issues and family concerns that are intertwined with work concerns.

Until very recently, married women with pre-school age children were the least likely of any women to be in the labor force. It was like this for years. Then, in 1981, for the first time ever, married women with children under 6 were more likely to be working outside the home than married women with no children under 18. This event passed without much fanfare in the press, but I believe it is significant.

More children have mothers working outside the home now than at any other time in our history. If I had to point to one demographic phenomenon that was going to have the most widespread impact on American businesses and society in general during the 1980s—it would be the influx of mothers into the work force. In our attitude surveys of Americans—young and old, men and women—we find that people today still have pretty traditional ideas about mothers working. They're against it—especially for mothers of children not yet in school—unless it is an economic necessity. But, in practice, more and more mothers of young children are at work—because they feel it is financially necessary.
Well, if more mothers are at work—what is this doing to the traditional roles of men and women? Our studies have found inconsistencies in this area, too, between what people say they believe in and what they actually do.

In a survey last year of baby boomers, 3 of every 4 said that an "equal marriage"—one where both partners shared responsibilities on a 50-50 basis—was the lifestyle they preferred. But the studies I've seen of what really happens when a mother has a paying job suggest it is a very lopsided relationship. Women continue to be responsible for a good deal of home upkeep and childrearing chores—in addition to their paid work. Although some husbands are taking on more of these home responsibilities, a 50-50 split is the exception, rather than the norm.

SLIDE 25: Two-income Families

One positive side to working, of course, is the paycheck. Two-income couples are now more common than ones in which the husband is the only breadwinner. In fact, the "typical family" of the post-war period (the ones pictured in all the appliance ads)—a working dad, a stay-at-home mom and 2 kids—now accounts for only 1 in 18 households today. Yet many companies still conduct business as though they were the norm.

SLIDE 26: Financial Items Held in Own Name

Increasing participation of women in the work force has led to their increasing financial independence. That is the topic of our latest demographic study called "Women and Money." Copies are available.

Not only are more women making more money these days but they are becoming increasingly financially sophisticated. One indicator of women's growing financial independence is the trend toward greater ownership of various financial products in a woman's own name rather than jointly with her husband. Also, a recent study by the New York Stock Exchange revealed that the typical first-time investor of the early 1980s was 34 years old, married, working in a clerical or sales job and female.

In the years ahead, more families will be earning $40 to 50 thousand or more. A second income has catapulted many families—formerly in middle class—into affluent status. And, as baby boomers move into mid-management and higher level jobs, they'll be earning more money. The forecast is for a significant increase in upscale customers.

The U.S. is in the midst of profound demographic change. The changes I covered this morning and others—like an increasingly educated public—will alter consumer behavior and will directly impact the demand for the goods and services provided by your industry.

Some of the key consumer characteristics for your industry to watch in the future include:

1. More affluence—emphasis on quality and value
2. The continued influence of the aging baby boom—at an age when all those postponed marriages and babies are finally happening. It's nest feathering time and some predict the home furnishings industries to be profitable.
3. The importance of older consumers—with social security indexing they're the only group that didn't lose ground during the 1970s in terms of income. There's a growing market for health-related and convenience items for the elderly.
4. Changes in women as consumers—less time, more educated, more money.
5. Greater blurring of sex roles—are men and women becoming more alike in their consumer choices?
ACPTC IN THE TWENTY-FIRST CENTURY

Joann Ferguson Boles
Virginia Polytechnic Institute and State University

In April of 1983 Penny Damlo from a futuring firm in Minneapolis directed about 20 ACPTC members in a futuring exercise, a precursor to today. The first evening she worked with us, she asked each of us to write five directions we saw for our field in the next century so that she could learn something about clothing and textiles. The next morning she came back with a list of the answers we had given and a tally of how many times people had repeated various statements. Answers included: the industry was moving abroad, merchandising possibly was moving to two-year colleges, we were seeing an over-all decrease in college enrollment, we were having competition from business colleges and so on. As I listened, I hoped she was going to discuss those things that had been said. They all seemed so logical. Why hadn't I thought of them?

And then she remarked she'd like to meet the person who said that they saw, "No sewing machines for the joining of fabric parts, no woven or knitted textiles as we know them today, but instead saw individuals owning various body molds, getting up in the morning, plugging into a computer the activities of the day, the messages they wanted to send, and the receivers who would be receiving those messages. The computer would then send back an analysis of those activities. The person would open a drawer which was now a closet containing vials of colored liquid to put into the body molds connected to the computer analysis. The body molds would then be put into the microwave, or something like a microwave, and out would come the outfit to wear." This is my public confession of these ideas and, Penny Damlo, wherever you are, here I am. I use this story to introduce my talk and to say that I always fear that I will not do what is expected of me in a presentation. Experience has taught me that traditional logical ideas elude me and perhaps that is why my conservative friends call me a flaming liberal. It certainly can't be for performing in the fast lane.

Will we need an association of clothing and textiles professors in the 21st century? I would like to say, "Yes" based on the following assumptions: Faculty are necessary for teaching clothing and textiles in higher education because the apparel, textile, and retail industries exist, they employ expertise, and because people wear clothing. On an indirect level, we have students because clothing improves appearance. Most students are between 18 and 22, an age in which improvement of appearance and its consequent results drive students to an academic major which deals with a product they love; clothing. So, yes, we will have an association. I believe that united we stand and divided we fall, and this association is our united stand. I think it is germane that we establish our goals and indeed, I am hopeful that this futuring exercise will culminate in usable goals. Further, that we will emphasize our strengths and our inter-relationships, so that we may understand our goals, believe in our own strengths and practice our relationships. I honestly believe that we can improve peoples' lives through clothing, thus making the world a better place in which to live.

In the past year, I have been involved in a sabbatical project in which I spent my time in industry. The first time I worked with an executive at L.L. Bean where I was involved with the development of a research and design department for the company, he asked me why we were...
working on the design of a particular type of apparel aside from the
specific functional justifications. I told him that I believed we could
improve peoples' lives through the development of such functional items and
that, indeed, the world could be a better place in which to live. At
first, his eyebrows were raised because, you know, the "Ivory Tower"
reaction—they're the real world and we are not. (I didn't find that much
difference between their "real" world and our "real" world). By the time I
left and after having said that again many times, someone looked at me and
said, "Oh, you really do believe that?" Indeed I do.

The context in which we may look at this comes from the context as
individuals within the family of homo sapiens. It is within this framework
that we research and develop clothing for the human being. We concern
ourselves with the structural design and its relationship to the physical,
psychological, and social aspects of the human being, the textile and its
development in relationship to the structure and to the human being, the
marketing and retailing of that product in relationship to human needs, and
finally, the wearing of that product by human beings.

How can we build toward our goals in clothing and textiles? I see
three areas I would like to think about with you. One is the strengthening
of ourselves within our workplace. One possibility of strengthening our
positions is by seeking key administrative positions within our work
places, within our colleges, and within our universities. Another is by
gaining backing from industry for our ideas. This means asking for money
and necessitates going out and using routes that are not traditional ones.
This is a new frontier and you must make your own paths. Secondly, it
means becoming recognized as a voice in government and industry for
expertise in our field. Being recognized requires research that results in
usable improvements for the product which industry can use, and of course,
communication of those results to industry. Sometimes that involves
translating our results so they can be read by these people as well as
placing them in publications people in industry and government read. And,
lastly, we need to strengthen our relationship with the customer. This
involves seeing that garments that are the results of our research and
development are put in the marketplace.

We need to begin to think about believing in our own self-worth. No
one else has the product knowledge we have. Many people come to work in
this field with theory—theory in business, theory in engineering, theory
in design, theory in art history, theory in computer science, and theory in
psychology. They are often applying their theories to a product of which
they have only common or cursory knowledge. Common knowledge is acquired
through popular media and personal experience. You know—"Everyone wears
clothing." Or it may be the trial and error method—better known as seat-
of-the-pants training.

For example, how do you think most product managers fit a sample
garment? They change length and width, but contour and body articulation
points fend for themselves. How does a textile laboratory manager do a
comparative construction fit analysis of competitor products? With great
difficulty! Trial and error is the usual method. Quality and efficiency
could be speeded up by knowing the product. How does a designer meet the
physical, social and psychological needs of the customer? It's through
application of design principles to the product, and much hard earned
knowledge with profit and loss as no minor teacher. Higher quality is
achieved much more quickly if product knowledge is available.

We need to say, "Here we are. Here are our students. We have more
product knowledge—hence, we work faster, our finished product is of higher
quality and this leads to greater profits." We should have the competitive edge in employment, but industry doesn't know we are here. We must let them know. Corporations which employ us can achieve the competitive edge by offering higher quality garments to the customer whose life will be improved by clothing that functions well in the activity for which it was created. If we understand our goals, believe in ourselves, and sell ourselves to others so we can finally practice the total interrelationships of our field, we can achieve much. Often we begin to see our own specialties on the head of a pin, but we miss our own goal of the relationship of the product to the ultimate wearer. It is the total product—from the idea to the customer—that is our advantage. But, it is an advantage only if we can communicate our ideas and our research findings to significant others (textile and apparel manufacturers, retailers, and wearers). Can you answer the following question about your teaching and your research? "What does this knowledge/research mean to significant others?" If you can't answer that question, then no one can or will.

You may be asking what all this has to do with the 21st century. The past, the present, the future all have common threads. Only the voice varies. Futuring believes that one can look at the alternatives and direct the future. Our direction, our cutting edge, our very survival depends on looking at the total product and interacting from problem solving with each other. We must understand and identify our goals and practice them in a goal-directed manner.

Now let's consider ACPTC as an association. It is an association that brings together educators in clothing and textiles. It is easy to become involved in the organization. In the next decade you may find yourself chirping away on the future of the association. You are the association and, contrary to unpopular belief, there is not an "in group" running the region or national association. Some individuals spend a great deal of time together because it takes a great deal of time to solve problems. I think Eastern Region offers you a special opportunity in that it is small. If you have ideas, if you have directions in mind that you want to communicate, communicate them! Do it in a group, like this group, if you like to communicate in groups or do it on a one-to-one basis. My experience is that the idea exchange in ACPTC goes on from sun-up to the wee hours. And, if you believe in your idea and it doesn't take the first time, come back again and try someone else. Try a new way of saying it, but keep chirping. Again, my experience says that a good idea will find results if someone keeps taking it back--each time with an improvement. If you just want to be involved and have no great ideas at the moment, willing hands are needed to pursue our goals.

I guess I can't leave the topic of the future without some predictions. I predict ACPTC will grow and set goals and directions for itself as a result of our futuring efforts. I predict that clothing in the 21st century will improve our lives because it will be better related to our bodies, minds, and social needs. I predict that specialists in clothing and textiles will help lead the way. I predict that retailers in this country will begin performing some design functions because they know the customer. It is that knowledge which will allow more direct problem solving and contracting of production. I predict that in the 21st century we will move away from mass marketing and that each individual will be able to have a "bill of rights" guaranteeing the right to life, liberty, and the pursuit of happiness and clothing choices even if she is not a size 8, 10, 12, or 14, 5 foot, 5 inches tall, and built in the shape of a pear. And finally, I predict that in the 21st century, one of you will be standing up
here, showing us how to store our vials of textiles for clothing preparation in our body molds.

TEXTILES: THE FUTURE

Robert B. Lincks
Director of Personnel Development
Burlington Industries

Our view of the future is focused on the impact of imports on our industry and our efforts to meet and overcome that threat. Let me say at the outset that ours is a vital industry and one that is working hard to stay competitive. We believe that textiles and apparel are industries with a future.

First, let's frame the import problem: In 1983, textile and apparel imports reached an all-time high of 7.4 billion square yards, 1.5 billion square yards more than in 1982. Those imports had a value of more than $13.7 billion.

Since every 1 billion square yards of textile and apparel imports displace about 100,000 jobs in the nation's fiber, textile, and apparel industries, last year's imports kept 740,000 Americans out of work.

And, 1984 is shaping up even worse. In the first 9 months alone, 7.75 billion square yards were imported, exceeding the record 7.4 billion imported during all of 1983. The problem is particularly severe in apparel and apparel fabrics, where imports have taken over more than one-third of the U.S. market. If the present trend continues, by 1986 overseas suppliers will have captured at least half of the U.S. market.

How did this happen? It all starts with the fact that the textile industry is a basic industry. In our own case, it was the spark that in 1789 ignited the industrial revolution in America. In developing countries, textiles are usually the first industry established.

Today, nearly every country in the world has some kind of fiber, textile or apparel industry, and more than 100 countries ship their goods to the U.S. Why to the U.S.? Quite simply, because we are the biggest, most lucrative, and most open market in the world. Many foreign governments take a very active part in planning, financing, protecting, and directing their native industries. And, they are anxious to export in order to earn hard currencies, especially dollars. Dollars can be used for imports or to pay-off international loans. The U.S. is a natural target market, because of our high per capita income and our high consumption of textile products—over 53 pounds per person each year compared to only 35 pounds in Europe, 9 in China, or 3 in Indonesia.

So, worldwide production sources, a large U.S. market, low foreign production costs, and the profit motive are our challenges in purely economic terms. Well, there are over 2 million of us in the U.S. who are involved in this business and we're not ready to roll over and play dead. We have a comprehensive approach to the problem that calls for action on three fronts: government, industry, and the public.

We look to the government to make political decisions. A moment ago, I mentioned the economic factors that affect the import situation. There is much more at stake than simple economics. Unfortunately, our government does not seem to be able to make up its mind about textiles. On the one hand, it has negotiated a system of bilateral quotas and tariffs under the multifiber agreement. On the other hand, it has reacted hardly at all to
the alarming growth of textile imports that continue, despite such measures. Some of the growth can be accounted for by elaborate schemes that some off-shore suppliers have devised to circumvent U.S. laws. A part of that is outright fraud, such as mislabeling shipments. Another part of it is "dumping," gaining a foothold in the U.S. market by selling goods at a price below the going rate in the originating country. And then there is the question of "country of origin." By agreement, quotas are established as limits to what individual countries can ship to the U.S., and what has been happening more and more frequently is that some countries whose quotas have been filled are shipping partially completed garments to one or a succession of other countries for final assembly, finishing and packaging for final shipment to the U.S. under an unfilled quota of the last country to participate in the scheme.

When the government announced its intention to tighten up the rules governing "country of origin," a hue and cry was raised by foreign countries that had been engaging in the practice—which was predictable—and by American retailers—which I suppose was also predictable. The ultimate fate of this simple action is still uncertain, but the fact that the U.S. government has already backed down a little shows its ambivalence towards textiles and apparel markets.

I will freely admit that we need government intervention if we are to survive. We need to have "fair trade" policies enforced, so that American products can compete with imported goods on a level playing field. But government, not industry, makes those policies. We need that government support, not because we are unwilling to help ourselves, but because of the intrinsic value of the textile and apparel industry, the nation's economic, social and political well-being, and because many other countries are playing by a different set of rules.

I have talked about actions at the government level. Now let me turn to what we in the industry have been doing. Our record on capital investments for modernization is excellent. For over a decade, the textile industry has invested an average of more than one billion dollars annually in new plants and equipment. Textile companies have, on the average, put about 80% of the retained cash flow back into their plants for modernization and increased efficiency. At Burlington Industries, we have been making capital investments in domestic textile operations, primarily for modernization, at a rate of about $150 million a year over the last 10 years. Every time the government has created an improved capital spending climate, the textile industry has responded by investing the money in job creating facilities and equipment.

A direct result of this has been a substantial increase in productivity. The United States has the most productive textile industry in the world, which offsets in part the low wage situation in most other countries, especially in Asia. The textile industry, with an average annual productivity gain of 4.6% over the past 10 years, leads all other U.S. manufacturing industries in this measure. Incidentally, Burlington's productivity gain is between 5 and 6 percent a year.
In addition, higher productivity or modernization programs have provided many other benefits which include better quality, more flexibility, a greater ability to meet our customer needs, better inventory control, improved energy efficiency, a better environment inside and outside our plants, and greater job opportunities for employees.

More has happened in textile technology in the last 20 years than in the preceding two centuries, and the effect of this on productivity and quality has been phenomenal. Not all that long ago, we were spinning just 50 feet of yarn per minute. Today, open end spinning equipment processes around 300 feet every 60 seconds and air jet spinning can handle up to 600 feet per minute. Some new techniques in the works may bring the figure up to 1,000 feet per minute. Modern spinning equipment has also eliminated a lot of processes. Where once we had to go through as many as 15 steps to manufacture yarn, we may soon get down to as few as three.

Texturing machinery is equally amazing. Where once we texturized less than 100 meters per minute, we're now up to between 1,000 and 1,200 meters per minute. Shuttleless looms, of course, are worlds apart from conventional looms. They operate as much as three times faster, and produce better quality products. They also allow us to make wide width fabrics—as much as 70 inches wide when finished—and in large rolls. This, of course, makes our customers happy because they're able to achieve production efficiencies and cost reductions of their own. With computerized cutting rooms, many customers find it to their advantage to use the better quality, wider fabrics now being provided them.

In dyeing and finishing, process control provides better quality, fewer reruns, reduced consumption of materials and energy. It will help us take advantage of technological advances that we see coming in the near future, such as tenter range speeds of 200 yards per minute and automated drug rooms as well as other innovations.

Recognizing that the apparel industry must make similar advances to keep U.S. apparel manufacturing ahead of foreign competition, a joint research and development effort is currently underway to produce an automated sewing and materials handling system. The effort has the support of textile companies, fiber producers, apparel manufacturers; the Amalgamated Clothing and Textile Worker's Union and the U.S. Department of Commerce. An organization has been formed known as Textile/Clothing Technology Corporation or "TC2" to do research in this area. The organization was formed as a result of a National Science Foundation study in 1979. This research is currently underway at the Charles Stark Draper Laboratory in Cambridge, Massachusetts. It's a unique approach, and the success we've achieved so far is very encouraging. We need to make the best use of modern technology to improve competitiveness. The more we use the technology available to us, the more we can free our employees from strenuous, unpleasant tasks in order for them to concentrate on more challenging work.

A relatively new facet of automation on the plant floor is robotic technology, which has a great deal of potential for the textile industry. Not only can these machines work consistently and non-stop, but monotony and dirt don't bother them. Robots are also immune to cotton dust, noise, chemicals and other health hazards and they're providing one more way for our industry to maintain its competitive edge in world trade. Robotics, sophisticated manufacturing equipment, computers, process control and automated materials handling are all, taken by themselves, islands of automation. But there is one final step: The linkage between all these
technologies which taken together form a fully automated computer integrated manufacturing system.

The office of the future must be developed just as carefully as manufacturing. That's the only way to insure that productivity, customer service, inventory and management, planning, control, and much, much more is truly enhanced.

That brings me to the role of production and maintenance employees in the modernization process and what we must do to help them perform. Upgrading the skill level of our employees is the key to successful modernization. We must help them respond to these opportunities by providing good retraining and development programs. If we spend billions of dollars on all of the capital equipment that I've been referring to and then nothing on helping the people who must operate and maintain it, we're pouring all our money down the drain. Skilled maintenance people are especially important. These expensive, sophisticated machines we're installing must run 24 hours a day to be economically feasible, and down time is incredibly costly. In other words, machines can do wonderful things, but people will always be our greatest asset. Yes, there will be fewer employees than we've seen in the past, but if we don't modernize, far fewer will find textile employment. We must compete effectively if we are to keep our doors open.

The final area I would like to speak to is our effort on the third front— the American public. A very important part of the industry's effort over the past year and a half has been the "Crafted With Pride in U.S.A." campaign. Basically, "Crafted With Pride" is intended to make customers more aware of where the textile and apparel products they buy are coming from. Having made them more aware, obviously we want to convince them that there are many important reasons for them to buy American.

We're trying to market the "Made in America" label. We're trying to create a strong demand for that label in the hope that we can keep imports from completely dominating our market.

We have several factors on our side. Studies indicate American consumers are concerned about imports and have a preference for American made goods. The industry has a good reputation with the public in terms of quality and value of its products. Unlike automobiles, foreign imports of textiles and apparel have not established themselves in the public mind as being superior in workmanship. And we have a good, positive story to tell about what our country is doing to help themselves.

We have our work cut out for us. We want shoppers to start looking for the "Made in America" label; we want retailers to become aware of the demand for that label and respond to that demand by stocking a greater balance of U.S. versus foreign goods. This isn't going to happen overnight, but it can happen.

Support and cooperation are the important words in our campaign. Burlington is definitely not trying to exert negative pressures on anyone. We've been commended for our even-handed approach and we plan to continue that. Our "Crafted With Pride" campaign is not anti-imports, it's not anti-Japanese, anti-Chinese, anti-retailer or anything of the sort. It's an honest effort to market our products in a positive way. We think the consumer should have a choice, and that the retailer should provide that choice. And that's what we're fighting for.

We believe that Washington will wake up soon to the realization that the textile industry is a vital sector of our national economy. We believe that American technological and entrepreneurial ingenuity will find ways to close the price gap between U.S. and foreign production. And, we believe
that American consumers know where their true interests lie—in quality and value of American made textile and apparel products.

We believe all these things because we know the people in industry. They are people who can make things happen. With your interest and role in our industry, we know we can count on your support.

APPAREL: A VIEW OF THE FUTURE AND CONCERNS OF THE PRESENT

Fred B. Shippee
Director of Technical Services
American Apparel Manufacturing Association

The apparel industry is appropriately listed in your agenda—we will have a future. And we are a stakeholder with over 1.2 million workers employed domestically in the production of apparel with a wholesale value in excess of $40 billion. When the textile and fiber industries are added, this workforce approaches 2.5 million persons. We are certain we have a future because we believe that for protection against the environment, and perhaps equally, to derive satisfaction and pleasure, people will continue to buy and wear clothing.

To define and to analyze the apparel industry is an extremely difficult and often very risky exercise. Individual plants and individual companies manufacture widely differing products for men, women, and children. Products are made from knitted fabrics and woven fabrics. There are 22,000 manufacturing plants over half of which employ less than 50 workers. These 22,000 plants are owned by about 14,000 firms and probably fewer than 100 have annual sales in excess of $5 million.

Any speculation about the future of such a heterogeneous and decentralized industry must relate to its current conditions and concerns. We, like many sectors of our economy, as pointed out by John Naisbitt in Megatrends, should not look to our past to define our future. We must recognize our current condition and address our concerns.

What are the concerns of the domestic apparel manufacturing industry? We have time today to at least identify and discuss a few of the most important ones. They are:

- Imports
- Labor intensity
- Rapid style changes
- Loss of basic products
- Poor quality
- Specialty fabrics
- Management training
- Total Productivity
- Capital formation

These subjects and many related ones have been and are being addressed in publications and other work products of our Association's 20 some standing committees. For example, the Proceedings of our last five annual research conferences have covered:

- Workplace Systems Engineering
- Planning Your Company's Future
- Apparel Productivity
- Apparel Manufacturing in the 90's
- Flexible Apparel Systems

Our industry clearly recognizes that major changes must take place if we are to remain healthy.

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First, the rapid uncontrolled growth of imported apparel must stop, but it will not be curbed by federal regulations on quotas or tariffs. The U.S. today is part of a world economy and the apparel industry, like steel, automobiles, electronics, and shoes, will survive only if we have the capability to truly compete in the environment of a world economy.

That brings us to our next concern, the labor intensity of our products. At least half of the cost of manufacturing apparel is labor and labor costs have doubled in the past 10 years. Today we are faced with paying over $5.00 per hour for entry level workers to do much of our manufacturing while many other countries have unlimited available labor at as little as 1/10 our wage rates.

One answer to this problem is to reduce the labor intensity in our manufacturing—not by simple mechanical aids to assist in sewing, but by revolutionary concepts in automation. The two basic elements in garment manufacturing are fabric handling or positioning and fabric joining or sewing. Since actual sewing is less than 20% of the total manufacturing process, it is obvious that methods to recognize, move, and position cut fabric parts to the sewing station offer the greatest benefit. A major breakthrough in this technology has been made by Draper Laboratories employing computers, TV cameras, and novel movement techniques. The commercial development of this concept now has broad financial support from both industry and the federal government.

Our industry's ability to recognize and quickly respond to both growing and waning consumer demands offers another opportunity to enhance domestic manufacturing and to offset any perceived advantage for imports. The implementation of unit production systems and information control systems from fabric to consumer are offering our industry a significant edge in securing our future. As described by one apparel executive, quick response is just another way of saying that it is cheaper to store 100 lbs. of nylon chips than it is to store 100 lbs. of nylon bras.

The average consumer appears to be turning away from a number of basic large volume apparel items—perhaps the current suffering and cutbacks by the denim jeans sector of our industry is the best example of this widespread trend. This decline in the volume of some of our more basic products has been accompanied by more rapid style changes in many apparel items. This has increased the demand for short run specialty fabrics. Very few of these are available domestically, and the purchasing of specialty fabrics off-shore has resulted in many domestic apparel manufacturers producing their own garments at the low labor cost off-shore location. Our domestic textile mills must respond to the consumer and apparel industry demand for short run fabrics or imports will continue to grow.

Our quality concerns lie in two areas. It is often very difficult to produce uniform good quality apparel when styles are constantly changing. The textile mills seem to face the same problem and the fabric quality delivered by mills today is often far below reasonable expectation.

As the apparel industry recognizes these concerns and attempts to move from a mature, stable industry toward a new era of automation and flexibility, we also find significant problems in management training, in total productivity and in the capital formation of our industry.

So! What is the future of the apparel industry to be? Interesting and challenging. It is even a challenge to try to describe all of the challenges before us in the short time allotted here today. I hope I have been at least partially successful and I look forward to the opportunity to discuss these issues with you in further detail.
THE FUTURE OF RETAILING

Dorothy Choitz Foster, Buyer--Cosmetics & Fragrances
J.C. Penney Co.

It's a formidable task to address the topic of "The Future of Retailing" in 10 minutes. It's rather like discussing "The History of the World and Other Subjects" in 10 minutes. However, this morning I would like to raise some issues that we can explore further this afternoon in our small group sessions.

Retailing is currently in a state of flux. Sometimes it is helpful to look at where we've been to see where we are going. It's amazing to consider the number of changes that have occurred in retailing in the last 10 years and we can probably expect an equal, if not greater, number of changes to occur in the next 10 years. Consider the following:

1. The demise of major retailers such as W.T. Grant, E.J. Korvettes, Halle Brothers—all victims of Chapter 11.
2. The merging of many stores and the elimination of some regional department stores. Dayton-Hudson is a major retail conglomerate with Dayton's Department Stores in Minneapolis, J.L. Hudson in Detroit, Mervyn's, B. Dalton, and Target Stores. Dillard's Department Stores in the Southwest have swallowed up Stix Baer & Fuller of St. Louis and John A. Brown of Oklahoma.
3. The growth of regional shopping centers. In 1960, there were 4,500 shopping centers in the U.S.; in 1980, there were 22,050. Clearly, some markets are over-stored. The future growth in the number of regional malls will not be as dramatic as it has been in the past.
4. The expansion of major regional department stores into many major markets not formally considered their "turf". I was struck by this phenomenon recently when I was in Dallas where you can shop at Marshall Field's (Chicago), Macy's (New York), Lord & Taylor (New York), I.Magnin (San Francisco), Saks Fifth Avenue (New York), Bloomingdale's (New York), Gokey's (Minneapolis) in addition to the traditional Texas department stores such as Neiman Marcus, Sakowitz, Sanger Harris, Dillard's and Joske's. The regional lines are obviously blurring.
5. In addition, when Bloomingdale's went into Valley View Mall in Dallas to join Sanger Harris, it was the first time that two Federated stores were located in the same mall, thus competing with each other.
6. The increase in specialty retailers such as Toys'R Us, Brookstone, Athlete's Foot, Home Computer stores.
7. The increase in the number of discount chains such as Walmart, K-Mart, Venture, Target, as well as the increase in upscale discounters featuring designer apparel such as Loehmann's, Cohoes, and many others. Many customers feel it is chic to get a good bargain.
8. The growth of catalog shopping and other direct mail marketing. Certainly, there has been some shake-out in this industry, but I know that it is a growth industry by the incredible number of catalogs I receive every week. As a working woman, I often find it more convenient to browse and shop at home at 11:00 PM when I haven't had a chance to get to a regular retail store. And, I'm obviously not alone.
9. The phenomenal success of the new fragrance Giorgio of Beverly Hills was predicated on their tremendous direct mail marketing campaign.

10. Consider the use of interactive computers both at point-of-sale in retail stores as well as the in-home cable TV tests that have been conducted in various markets.

As a retailer, competition is much more fierce these days. Consumers now have more choices than ever before in what to buy and where to buy it. Consumers of the 80's are more educated, demanding, and individualistic than any previous generation. There are many opportunities but many more challenges for retailers today. It's been said that the one thing that you can count on today is change, and that's as true for retailing as for anything else. Retailers who don't keep up with change are the ones who will become as extinct as the woolly mammoth.

Since my own company is going through many changes in an effort to meet the needs of today's and tomorrow's consumers, I thought I would use the J.C. Penney Company as a case study to show how one retailer addresses the need to change position.

To set the stage, J.C. Penney has been in business since 1902. We have 1700 stores, a $2 billion catalog operation, Thift Drug Stores, a chain of stores in Belgium called Sarma, and a Financial Services business including insurance, banking and realty services. Sales in 1983 were $12,078,000 placing us as the nation's third largest retailer behind Sears and K-Mart. We have more real estate in the major regional shopping centers than any other retailer in the United States. Our challenge was to determine how to make that real estate more profitable for the 80s, 90s, and beyond. And obviously, to be more profitable, you trade-up rather than trade-down.

Some years ago, we conducted extensive consumer research on expectations of consumers in regional shopping center environments. We found that consumers were looking for fashion merchandise for themselves, their families and their homes. They were not very interested in purchasing hard lines, major appliances, hardware or paint in those environments. On the basis of that research, which is more comprehensive than what I have conveyed today, we made the decision to go after the department store customer. In effect, to become the only truly national department store in the United States. However, it's much easier to say you are going to become a department store than to do it. And you, as educators, know that changing people's perceptions is probably one of the hardest tasks to achieve. We had to address not only the perceptions of J.C. Penney customers, but also the perceptions of J.C. Penney associates. I will briefly touch on some of the other elements that had to be addressed.

First of all, we got out of certain unprofitable businesses like hard lines, appliances and auto centers so that we could concentrate on the profitable opportunity areas of men's and women's fashion apparel, soft home furnishings and children's apparel. This enabled us to devote more space and make a more meaningful statement in these categories. Our merchandise mix had to be evaluated on the basis of character and type of merchandise. Most of our customers thought of J.C. Penney for dependability, quality and value, but not so much for fashionability. Fashionability is very important to today's consumer, and particularly to the department store customer.

We know that the department store customer shops in our stores. We are not looking for the elusive customer who has never set foot in a J.C.
Penney store before. She probably bought underwear for her husband, home furnishing items and clothes for her kids. However, when it came to purchasing her own fashion apparel, she turned on her heel and went down to the department store at the other end of the mall. We obviously want her to find her fashion needs fulfilled at J.C. Penney. To that end we have developed new fashion programs such as the Halston III Collection and Lee Wright Designer Collections as well as our "Salute to Italy" promotion this fall.

The physical appearance for the stores is of critical importance. To be a department store, you must look like a department store. And that includes elements such as store layout, carpeting, lighting, presentation of merchandise, mannequin clusters and the overall ambiance of the store. To that end, we have committed $1.5 billion to renovate our top 500 fashion department stores. I'll show you some slides shortly to show results of that renovation. Just as an aside, store managers have told us that in some of the renovated stores, a customer will walk in and then back out and look up at the store name to see if they really are in a J.C. Penney store. We look that different.

We evaluated our communications to our customers. What signals were we sending out to customers through advertising, publicity, community events, even our sales associates in our stores? This year, we have upgraded our marketing communications to our customers. In addition, we appointed a new advertising agency, N.W. Ayer, to help us address some of these issues.

Is the formula working? We think it is. Certainly as a company we are in a period of transition, but the results have been very exciting in our renovated stores. Someday, we may appear in a Harvard Business School case study as a retail success story of the 1980s.

This has been a very brief overview of the changes in the retail environment. I look forward to discussing these issues with you at our small group sessions. Thank you.

TEXTILES AND CLOTHING - OUR FUTURE: WHERE FROM HERE?

Barbara S. Stowe, Dean - College of Home Economics
Kansas State University

It is wonderful to be back in the Eastern Region of ACPTC and to look to our professional future with you. It is one of the healthiest things we have done professionally for a long time. I am going to begin with some gleanings from what I have heard here today.

On the one hand, there was good news: Some of our graduates are making decisions in textiles and clothing industries and are recognized for it. We have already heard from one, Dottie Foster, who was on our program today. Nancy Sears, a graduate of the University of North Carolina-Greensboro, is about to become president of the men's wear division of Burlington. Lee Langen, a Cornell M.S. graduate was just hired by Norma Kamali from some seventy applicants. And, I am sure there are others.

But there is also some not-so-good news. Textiles and clothing programs are still not routinely seen as the source of competent textiles and clothing professionals. We have heard that a history major has as good a chance of being recruited by one of the textile companies as one of our

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In today's program, I have not really heard what the future will be, but more of what the present is and how to react to it more quickly. As Fred Shippee has noted, we are still looking to the past to understand the future. Barbara Price has given us a good overview of population demographics. Will we know how to use that information? How many of us are still planning curricula solely for 18 to 22-year olds? How many are defining the consumer unit as a two-parent family with two kids and a dog? How many are thinking of daycare for the elderly as well as for children? As Dottie Foster observed, people's perceptions are hard to change. Are we part of those "People"? As educators, we cannot afford to be.

I would like to report to you now what has been occurring in Central Region in the way of future planning. Like Eastern Region, the process began at the ACPTC Futures Seminar in April of 1983 in Minneapolis. At that meeting, seven opportunity areas were identified. They are:

1) improve the national/international scope of the field
2) develop and adopt new technologies in communication as well as in textiles and clothing
3) promote a positive image of textiles and clothing as a professional field
4) maximize our leadership potential
5) improve the quality of textiles and clothing programs
6) promote cross-disciplinary research involvement
7) develop a plan of service to consumers, business and industry

At the 1984 annual Central Region meeting in Knoxville, discussion of these seven opportunity areas generated 52 action steps which were then prioritized through forced choice paired comparisons and narrowed down to the top 14 ideas. Of these, the top five were:

1. ACPTC-CR will assist textiles and clothing professionals to develop a futuristic framework, and plan for its continual evaluation by creating new linkages, new programs and updating goals.
2. ACPTC-CR will develop an action plan for targeted textiles and apparel businesses, industries, agencies and institutions which will establish ACPTC members as sources of expertise, i.e., consultants, researchers, board members, and their graduates as employees.
3. ACPTC-CR will develop a data base and network for sharing international programming within individual textile and clothing units; survey international experience (language, teaching, research, study) and interests of members; identify opportunities for international exchange of people, artifacts, technological developments; evaluate textile and clothing programs to attract international students.
4. ACPTC-CR will utilize the telecommunications revolution by establishing clearing houses, data banks, software evaluation.
5. ACPTC-CR will conduct research in textile and apparel production, design and marketing, utilizing technology and computer applications.

Other themes that emerged from the Central Region meeting were:

1) interdisciplinary research is a real strength that we have within our departments and colleges, since we have the resources to deal with complex design problems.
2) we need conferences on international trade for the professional development of our members.
3) we need greater involvement in public policy which affects textiles and clothing.
4) ACPTC-CR should develop a manual of resource materials for campus placement units to assure that employers ask to interview textiles and clothing graduates and associate those graduates with ACPTC.

Penny Damlo, the futuring consultant present at both the Minneapolis seminar and the Central Region meeting, offered this summary of the ACPTC-CR future planning process:

1) One-third of the action steps generated were external (directed towards other groups) while two-thirds were internal.

2) Research is a major thrust of ACPTC.

3) ACPTC-CR members recommended many networks for themselves

4) ACPTC-CR members suggested many conferences.

5) ACPTC-CR members are just beginning to use technology tools already known for 15 years.

6) ACPTC members want to be seen as leaders and get their share of the "credibility pie."

To summarize, I see three key ideas emerging from today's presentations and discussions. First, as educators we must keep an eye on the purpose of textiles and clothing education. This is bound to be a fast-moving target requiring continuous evaluation and revision. We have students only a short time out of their professional lives, and we need to train them to be flexible. We must develop and maintain strong dialogues with potential employers of our graduates to help determine the nature of our educational programs. Only then will we be seen as the source of expertise. We need to encourage the commitment of business and industry to the educational enterprise, and this will happen only when it is a felt need. A foundation for communication must be established and nurtured. This means taking leadership roles in professional organizations other than ACPTC. It also means making available associate memberships in ACPTC for business, industry and agency representatives. If you can join just three organizations, let them by ACPTC, a specialized professional group (AATCC, Costume Society, etc.) and a more general subject-matter group (American Psychological Association, American Chemical Society, etc).

Second, we need to conduct and encourage interdisciplinary and multidisciplinary research, using a systems approach to deal with problems which draw upon our fundamental knowledge base. This is our unique feature: we are in colleges where we can study complex problems and where a variety of expertise is available and in close proximity. We deal with human factors, technological factors, and cultural factors. Many marketing disasters have occurred because the boundaries of a problem were drawn too narrowly. I am sure you remember the wash and wear clothing produced with shrinking thread and zipper tape. With computer technology we can handle complex variables. We need to teach the use of this technology, not so much how to program it, but how to use it to solve problems.

Third and finally, as an organization, we need a futures agenda with concrete action steps to get there. To remain as a viable resource we must be several steps ahead of industry needs. We must have credibility as a source of future thinking and actions. We must look outward as much as we look inward. We must have direct involvement with those industries and agencies whom we expect to influence and whose decisions influence us. A word about setting standards or minimum competencies for our graduates. We may lose valuable time on a very complex task which may do little to further our objectives. Better to spend that time learning about and linking with those industries we purport to serve.

Alvin Toffler, in Future Shock wrote that the knowledge base had been doubling every four years. Now that rate is estimated to be every twenty
months. The operative word at today's conference was "flexibility." We need to focus our efforts on the most basic skills and knowledge for students, that which is relatively unchanging. Then teach them how to use that knowledge to evaluate new information, to think creatively, and to make connections among parts of complex systems.

Because, as Dottie Foster says, "You can't turn a dead elephant around by the tail." Let's be sure the elephant is alive and well and responsive to our commands.

INTERNATIONAL TRADE IN TEXTILES AND CLOTHING: IMPLICATIONS FOR THE FUTURE

Barbara K. Nordquist
Howard University

For over twenty years the United States has tried through multilateral and bilateral agreements to resolve the problems of trade in textiles and apparel with developing nations. Yesterday you heard industry leaders constantly refer to the "problem" of imports and of massive efforts to re-tool and retrain to remain competitive. We learned that at least 1/3 and perhaps as much as 1/2 of apparel goods in U.S. markets today are imports. As with any "problem" there are several solutions which no one finds completely acceptable.

The clothing and textile import problem has three main constituents: the consumer, the producer and the retailer. Due to lower wages, foreign companies can often manufacture products of equivalent quality for less cost. From a consumer's point of view, these economies are reflected in greater value for the dollar. When the domestic market is unable to compete economically with foreign imports, however, the producer loses. Workers lose jobs, plants close and the government must either help retrain workers or watch them go on unemployment and welfare. Retailers, on the other hand, benefit from free access to world markets. Foreign goods which are produced for less can be retailed for greater profit when they compete with domestic products of similar quality but higher cost. The mark-up differential can be greater for foreign products while still maintaining a salable price.

A further complication arises when we consider clothing and textiles imports relative to U.S. trade in general. Countries in need of U.S. products such as food and technology want to balance their trade deficits and textiles and apparel are frequently important bases of their economies. Such nations must sell to the U.S. the products they can produce in order to maintain stable economies.

The U.S. position has been to attempt to find a balance between encouragement of the U.S. textile industry and promotion of free trade in textile products. Through bilateral negotiations and the multilateral General Agreement on Tariffs and Trade (GATT), the U.S. has attempted to regulate trade with textile nations. These agreements broadly serve two purposes: they encourage textile manufacturing in developing countries, thereby fostering the accumulation of capital; and, they protect the U.S. textile industry. This latter point is significant since 2.1 million

1 For a more thorough examination of this topic see Nordquist, BK, The Clothing & Textiles Research Journal 3(2), Spring, 1985 pp. 35-39
workers, or one of every nine U.S. manufacturing workers and one million cotton farmers and wool growers are dependent on the U.S. textile industry.

United States textile agreements started in 1962 with the Long Term Arrangement Regarding International Trade in Cotton Textiles (LTA). This agreement was extended twice, but since LTA covered only cotton textiles it did not solve problems associated with other fibers.

Between 1964 and 1971, man-made fiber imports to the U.S. grew by 1200 percent. During this period, we had no restrictions on man-made fiber imports. United States domestic industry was seriously affected by cheaper foreign imports entering the United States in enormous quantities. Accordingly, the U.S. sought negotiation of a multi-fiber international agreement to deal with these worldwide textile trade problems culminating in the 1973 Multi-Fiber Arrangement (MFA). A second negotiation concerning this arrangement was concluded and entered into force in 1978 and was again extended first to 1980 and then to 1986. Thirty-nine members including the European Economic Council are parties to the agreement.

It is the MFA that sets specific quotas for imported textile and apparel items. In addition, one of the most important features for workers and plant owners in the United States was a provision that would allow an importing country to take unilateral action to restrict imports "disrupting the market" if after 60 days of bilateral consultations with the government of the exporting country, the problem was not satisfactorily resolved. The follow-on MFA arrangement allowed the importing country to unilaterally decline to accept the imports of textile products causing the disruption based on a formula in the Arrangement. The altered MFA also established institutional arrangements in the form of a Textiles Surveillance Body that, together with the Textiles Committee, supervised the operation of the Arrangement. It also served as a review body for all bilateral agreements and for unilateral actions taken pursuant to the Arrangement.

When the Arrangement was renegotiated in 1977 and again in 1981 the familiar problems were re-iterated: developing nations wanted to sell more textiles and developed countries feared the impact of increased quotas on their domestic workers. An additional factor is that the Protocol drew attention to the decline in the growth of per capita consumption of textiles and clothing and the assumption that this factor was relevant to the "market disruption" criteria.

The MFA works through the Committee for the Implementation of Textile Agreements (CITA) which is an interagency group chaired by the U.S. Commerce Department's Office of Textiles and Apparel. CITA supervises compliance with the MFA and 25 other bilateral agreements. The Committee has representatives from the Departments of Commerce, State, Labor, Treasury (Customs) and the Office of the United States Trade Representative. Private sector advisors from various industry sectors such as management, labor, retailers, and importers are included in CITA's deliberations. In addition, The Department of Commerce has three textile advisory committees that meet regularly to discuss changes in U.S. policy and implementation problems. The committees are: 1) Importers and Retailers, 2) Labor, and 3) Industry. The advice these groups give to the chief textile negotiator working out of the U.S. Trade Representative Office helps create a more complete perspective for negotiating both bilateral and multilateral arrangements.

Each government agency brings a particular viewpoint based on its constituency. State is concerned with the effect of a program on U.S. foreign policy. Commerce collects the statistical data generated by the Customs Department (Treasury) at ports of entry and seeks to give the U.S.
industry point of view. Labor represents U.S. workers who stand to lose jobs if they cannot compete with imports. The U.S. Trade Office's primary role is to promote international trade.

Quotas set in the MFA are specific by type of article and country of origin. Exporting countries negotiate their categories and quotas and then begin to ship to importing countries. In the case of U.S. importers, contracts are first made for production in an exporting country. After payment is made for these goods, the U.S. importer awaits shipment to a U.S. port. Upon arrival, items are inspected by a Customs officer and data are collected on items and country of origin. These data are passed on to the Commerce Department where running tabulations of quota fulfillment are kept.

When a signatory country has overshipped in a particular category, the Commerce Department notifies Customs officers who embargo the goods at the port, forcing inventory problems for retailers awaiting shipments. Items may go on the following year's quota but are not released from embargo until January 1 of the following year. Countries overshipping at the end of 1983 included China, South Korea, Thailand, Singapore, Mexico, Pakistan and Hungary.

If a country wishes to expand its quota to an importing country at a faster rate than that allowed by the MFA (usually 1% per year), the exporting country has the right to plead before the Textile Surveillance Board (TSB) in Geneva. The TSB is composed of eight members from four exporting and four importing countries and is basically a reviewing body which can expose facts of a case but has no real power to force compliance with its decisions.

Another method for settling import disputes is by a U.S. firm or trade group filing a complaint with the International Trade Commission. If an injury finding can be alleged, the ITC forum will be used, rather than the TSB, because the ITC can set countervailing duties and/or dumping duties on an importing country.

The U.S. negotiates separate agreements with countries which are not signatories to MFA such as the Peoples Republic of China.

International trade in textiles and clothing requires a careful balancing of interests. On one side are the needs of consumers and retailers and on the other, the needs of producers and working Americans. The fulcrum is shifted to meet changing international alignments and compliance with foreign-policy considerations. The modern study of clothing and textiles is incomplete without considering the international context. Millions of jobs are affected by decisions made by lobbyists, consumer advocates, and diplomats in Washington, D.C.

Professors of textiles and clothing prepare students for careers in many parts of the industry. The domestic textile and apparel industry will be increasingly at odds in the future with the retailing industry. Consumer interests come at odds with social service and labor union interests when jobs are sacrificed for lower prices for textiles and apparel. Professors should not align themselves with a rigid position in the complex subject of international trade in textiles and apparel. They would be remiss if they were not aware of the many facets of the problem and the fact that students entering the various segments of the field need to be objectively informed about all sides of the problem.

Students planning for careers as designers will be faced with choosing between domestic or off-shore production. Retailing executives will have to decide between domestic producers with higher prices and deliver surety or foreign suppliers with lower prices and quota restrictions. A new
career of textile and apparel importer/exporter is opening, and poses exciting challenges for the entrepreneurial-minded student.

For over twenty years, the U.S. has tried through multi- and bilateral agreements to resolve the problems of trade in textile and apparel by trying to take into account all sides of the issue in forming these arrangements. It has organized various advisory groups to give input before decisions are made and the system has worked fairly well. The decision-making process requires a careful balancing of competing interests to reach acceptable solutions. No single interest can be pleased all of the time. In the final analysis, a precarious balance is reached between protecting U.S. jobs and promoting free trade.

WHERE TO FROM HERE? PLANNING ACPTC'S FUTURE

June F. Mohler
Winthrop College

The final session of Eastern Region's 1984 Annual Meeting took the form of a town-hall meeting. Key speaker was June Mohler, Dean of the School of Consumer Science, Winthrop College, South Carolina. The following includes excerpts from Mohler's introduction and the major goals statements expressed by members during the open forum discussion period.

This morning we conclude an exciting and productive annual meeting—one in which we've taken an inward look—one in which we've probed the future with important stakeholders—one in which we've acknowledged our limitations while proclaiming our accomplishments—and one in which we've shared ideas and solutions to problems in an atmosphere of mutual respect and concern for colleagues and our professional association. All around me this week I've seen evidence of a healthy and strong organization, of dedicated professionals willing to spend much time and money in personal participation and with the wisdom to hold this meeting in the beautiful Greenbrier.

I was asked to assist in concluding our meeting with a synopsis from an administrator's perspective, a summary of what our excellent speakers and presenters have said, so as to lead you in active discussion of major issues and problems we face in ACPTC. Our goal this morning is to bring from this meeting a set of proposed action statements which will assist our leaders in shaping our plans for the future.

May I first express to you some personal thoughts about our organization; they may lack somewhat in administrative objectivity, but they do reflect my high regard and respect for ACPTC as a professional organization. I believe that we have come a long way in a relatively short period of time and that we owe much of this progress to our rich past and to all those leaders in the past who have worked so diligently in creating this association. May I propose a toast to our past, and particularly this day, to those Eastern Region members who are retiring this year from our active ranks. We thank you for your many contributions, wish you a perfectly wonderful retirement, and hope you will continue to be involved in ACPTC.

From a present perspective, let us look at some challenges we face. Most of you have spent your entire professional lives in academe, attuned only to the philosophy and pace of the academy. More often than not, you
have had little encouragement in the way of time and financial resources in developing your knowledge of the world our graduates are entering. Yet we know that you must expand your outward look to become more knowledgeable of a high-tech, information-based society whose boundaries are no longer the United States, but the world itself. We must learn to manipulate new information and technology in such a way that the human need is not sacrificed, something which I believe we all hold as a basic part of our philosophical foundation. Most importantly, as we seek higher respect and recognition in academe we must examine some old practices and beliefs which may be impeding our quest for academic excellence. Perhaps we have been too close to examine objectively those practices of the past in their present context and meanings. If we are to be masters of our own fate, then we must learn to read the early warning signals of impending change in order to plan strategies that are more effective than those of response and reaction.

For all of you who have read or reviewed In Search of Excellence, you will remember the emphasis placed on action planning. To paraphrase Waterman and Peters, successful organizations are willing to take risks, to experiment and to seek actively those people who are action-oriented. While risk-taking is viewed by many as unwise or inappropriate, I believe that we should fear the missing of opportunities more than we fear the making of mistakes. Of course, wise people learn from the mistakes of the past, but we should not use them as a shield to protect us from needed criticism and change.

It is obvious from the comments and suggestions which you submitted for this meeting that many of you share my concerns and have asked for them to be aired at this forum. I have taken the liberty of attempting to classify and categorize your suggestions into these general topics: 1) structure of the organization; 2) image and public relations; 3) curriculum development and quality control; 4) research; 5) membership and networking; 6) publications; 7) graduate programs/students; 8) secondary home economics teachers/curriculum of textiles and clothing.

During open forum discussion, the following major issues and action statements were developed:

1. ACPTC should move toward a national structure. Our present model is a tripartite one which weakens and dilutes our effectiveness and is not cost efficient. We need to give more attention to subject matter needs of individuals which are difficult to develop in small regional programs. We should pool our talents.

2. ACPTC should address members' needs for curriculum development to assure some degree of quality control of textiles and clothing academic programs, especially in Fashion Merchandising.

3. What is the role of clothing construction in our future? Do we need to study some newer ways of preparing students for the retailing field? (e.g., apparel evaluation.)

4. ACPTC should develop a marketing plan for ongoing interaction with businesses, industry and government.

5. ACPTC should be working with the T & C section of AHEA to give curriculum assistance to secondary home economics teachers.

6. We need to develop a stronger research focus in ACPTC; a task force should work on a plan to build a theoretical research base through the possible pooling of expertise within our profession (nationally).
7. ACPTC should sponsor (promote) more networking programs with our stakeholders so as to increase awareness of T & C graduates' skills and knowledge.

8. ACPTC needs to sponsor a pre-AHEA workshop which will focus on one major issue (Fashion Merchandising Curriculum Development and Secondary T & C Curriculum were noted, with major emphasis on Fashion Merchandising).

9. ACPTC must increase its visibility, both within our campus domains and outside to our many constituencies.

10. ACPTC must move toward a sounder financial base by pooling all regional resources into a national resource bank.

11. ACPTC must promote international understanding through program of work, curriculum development and membership expansion.

12. ACPTC should sponsor a program or conference for professional development in several targeted areas, such as retailing, international tools in textiles and apparel, etc.

13. ACPTC should provide members with updated technological information through programs, computer data bases, publications and special conferences in cooperation with business and industry.

RESEARCH REPORTS

THE ROLE OF PRICE AND CHANGE IN MARKET SHARES:
A STUDY OF TEXTILE AND APPAREL IMPORTS
FROM THE PEOPLE'S REPUBLIC OF CHINA

Susan Hester, Cornell University
Lois Gurel, Virginia Polytechnic Institute & State University

Textile trade between the United States and the People's Republic of China is an issue of current concern between the two governments. U.S. textile and apparel manufacturers have grown increasingly concerned about the rising level of imports from China (an increase from $42 million in 1977 to $894 million in 1982) and have turned to their government for protection. The need to balance the interests of multiple industrial sectors has made the formulation of U.S. textile trade policy a complex task.

Existing trade data from the past six years were examined in this research in order to investigate the role of price in relation to import market share. The goal was to determine if price was a major factor in changes observed in the import market shares of countries in 21 product categories. This question was examined from two different perspectives using two analytical methods. The first perspective was that of price elasticity. Logarithmic regression analyses were done to determine the responsiveness of the quantity demanded to a change in price. In the second analytical method, time-series cross-section regression analyses were used to determine the amount of variability in market share which could be explained by a combination of this period's relative price, previous period's market share, and market share two periods back.

Government and industry officials have often contended that the PRC uses pricing strategies to enter the American market and gain market share. The results of this study raise questions about this conclusion. In 10 of
21 categories studied, the indication was that an increase in price by the Chinese led to an increase in market share. The results of the time-series cross-section regression analysis suggest that relative price alone is an unreliable predictor. Based on these analyses, the assumption that price is the major factor in determining market share for Chinese textile and apparel imports cannot be supported.

THE PRESSURE OF MENSWEAR ON THE NECK
IN RELATION TO VISUAL PERFORMANCE

Leonora Langan & Susan Watkins, Cornell University

This research investigated the relationship between the pressure that menswear places on the neck and a man's visual discrimination. Since the blood flow to the retina of the eye could be traced through the carotid artery in the neck, it was logical to assume that a tight man's shirt and tie could decrease blood supply to the eye and eventually affect vision. In an experiment with a single subject, blood flow to the eye was noted to decrease dramatically when a shirt collar was tightened to 1/2" less than the unrestricted neck measurement.

In order to determine the incidence of tight neckwear usage among white collar working men, a pretest was conducted with 94 men who worked in law offices and business firms. Three neck measurements were made: the first, with the collar buttoned and the tie knotted; the second, with the tie released; and a third with both the collar and tie released. The results of this pretest demonstrated that 67% of the men tested wore neckwear that measured less than their neck measurements. The average tightness was 3/16" with the average portion due to the tie being 1/8". Twelve percent of the subjects had greater than 1/2" tightness.

Information collected to determine the factors that led to the incidence of neckwear tightness indicated that neither age, height/weight ratios, shirt collar ease, shirt purchaser, fiber content nor length of time a shirt was owned were significantly related to the incidence of neckwear tightness among these subjects.

The hypothesis for the study was: A man's visual performance will significantly decrease when wearing tight neckwear. The critical flicker frequency (CFF) test was used to evaluate visual discrimination. Twenty-two male subjects participated in this research. The subjects were measured as in the pretest to determine the amount of collar and tie tightness for each. Then, the CFF test was given 9 times. In tests 1-3, the collar was unbuttoned and the tie was loosened. In tests 4-6, each subject buttoned his shirt collar and knotted his tie. In tests 7-9, the neckwear was loosened again. An approximately 30 second interval separated each of the three groups of tests.

Ten control subjects were given the same 9 tests with no neckwear tightness. Their tests scores remained steady across the 9 tests, indicating that any differences in test results could not be attributed to CFF test procedures.

A two-tailed student's t-test was performed on the mean difference in each subject's CFF values between tests 1-3 and tests 4-6 (to see if neckwear tightness made a difference) and between tests 4-6 and tests 7-9 (to see if the effects of tightness were reversed immediately.) Results of this test indicated that there was a significant difference between CFF values when neckwear pressure was applied. Visual discrimination, in terms
of CFF scores, decreased significantly when a subject wore tight neckwear. There was no significant difference between tests 4-6 and tests 7-9. Visual discrimination, measured in CFF scores, did not significantly improve immediately after the removal of tight neckwear.

These results are relevant for white collar workers and people such as bus drivers, pilots and others who wear shirts and ties and are in occupations where visual discrimination is critical. It may hold even more importance for the over 50 population of men with carotid artery disease whose already occluded arteries could be closed by even a small amount of pressure on the neck.

DETERGENCY STUDY OF THE SYNERGISTIC EFFECT OF PARTICULATE AND OILY SOIL ON COTTON/POLYESTER FABRIC

S. Kay Obendorf & Joan I. Jubinsky, Cornell University

Soil found on clothing contains both particulate and oily material. The oily soil, often from body oils, encapsulates the fibers and the soil particles. Reflectance measurements, neutron activation, radiotracer techniques, and electron microscopy were used in this research to further characterize the interaction between oily and particulate soil.

In order to understand the synergistic effect of oil (triolein) and clay (Bandy Black) on fabric appearance, two sets of laboratory soiled specimens of a 50/50 cotton/polyester durable press fabric were prepared. On one set, the oil was applied first and then the clay, and on the second set the order of application was reversed. Two controls were used, one with clay soil only and the other with oily soil only. When clay soil was accompanied by oil in the soiling procedure, the whiteness of the fabric after laundering was much lower than that observed for the fabric soiled with either clay or oil alone. The manner in which the clay is encapsulated in the oily matrix and the absorption of oil onto the clay particles affect the detergency of the soil from the fabric and whiteness of the fabric after detergency. To further describe the phenomena of particulate and oil soiling, backscattered electron images and x-ray maps were used along with statistical analyses of the measurements of fabric whiteness and of the quantities of residual clay and oil.

Cleaning efficiency of four commercial laundry detergents with different builder systems were evaluated at two wash temperatures (27 and 49 degrees C). In very soft water, the builder system containing nitrilotriacetate (NTA) with carbonate and zeolite was observed to have slightly higher soil removal than the formulation of carbonate, zeolite and phosphate or of carbonate and zeolite. All three built detergents had higher soil removal than the unbuilt liquid detergent.

AN ANALYSIS OF THE PROPOSED STANDARD FOR THE FLAMMABILITY OF GENERAL WEARING APPAREL

Marjory J. Norton, Virginia Polytechnic Institute and State University

The Proposed Standard for the Flammability of General Wearing Apparel incorporates hazard classifications for garments, based on dimensions, and for fabrics, determined by ignition time and heat transfer rate measured on the Mushroom Apparel Flammability Tester. Expansive garments would require
less hazardous fabrics. The standard, proposed in 1976, has not been accepted. Yet, need still exists for hazard reduction and for analyses of this and other potentially mandatory or voluntary standards.

The objectives of this study were to determine the degree of conformity of a set of purchased women's nightgowns with the proposed standard and determine the relationship between nightgown fabrics' classifications under the standard and injury predicted on a mannequin. The sample included 27 varying nightgown styles, all laundered before data collection. The fiber content distribution was: 4 gowns of 100% cotton; 1 of 65% polyester/35% cotton; 1 of 65% cotton/35% polyester; 1 of 50% polyester/50% cotton; 1 of 50% polyester/50% rayon; 5 of 80% acetate/20% nylon; 2 of 100% polyester; and 12 of 100% nylon.

To accomplish the first objective, each gown and its main fabric were classified according to the standard. Measured garment widths at specified locations were compared to reference tables to establish garment classes. Fabric classes were assigned on the basis of ignition times (IT) and maximum heat transfer rates (MHTR), measured on specimens cut from the gowns (3-4 specimens/fabric).

All but one gown were in class 1, i.e., one or more widths equal or exceed the standard widths, and thus require Class 1 fabrics (MHTR < 0.40 J/cm².s, regardless of IT). One was in Class 2, i.e., no width equals or exceeds standard widths, and requires fabric in Class 1 or 2 (MHTR > 0.40 J/cm².s, IT > 1 s). The cotton fabrics were in Class 3 (MHTR > 0.40 J/cm².s, 0.5s < IT < 1 s). The disproportionate polyester/cotton blends were in Class 2, and the proportionate polyester/cellulosic blends were in Class 3. For acetate/nylon, the results were: one each in Classes 1 and 2, and three in Class 3. The polyester and nylon fabrics were in Class 1. Examining garment and fabric classes, all gowns of polyester or nylon and one of acetate/nylon (56% of the sample) conformed to the standard. Cotton and polyester/cellulosic gowns and four acetate/nylon gowns (44%) did not conform. Previous studies indicated that most nightgowns were in Class 1, but this analysis suggests a higher degree of conformity with the standard.

Fabric classifications were compared with injury severities predicted by burning three replicates per style on a mannequin. Injury severity was measured as the percentage of second-degree burn area. For the eight cotton and polyester/cellulosic gowns, with injury area 5.3-11.4%, six of the fabrics were in Class 3 and two were in Class 2. For the 14 polyester and nylon gowns, with injury area 0.0-0.6%, all fabrics were in Class 1, the least hazardous. Acetate/nylon gowns fell into an intermediate injury range, 0.6-2.8%, but had some fabrics in Classes 1, 2, and 3. Thus, the standard agreed well with mannequin predictions of the highest and lowest degrees of hazard, but gave anomalous results for intermediate levels. Anomalies in the intermediate group may arise from variable burning behavior of the acetate/nylon fabrics, noted even among specimens of the same fabric.

**DATING SELECTED COPTIC TEXTILES**
**BY TANDEM ACCELERATOR MASS SPECTROMETRY**

Lucy R. Sibley, University of Georgia
Douglas J. Donahue, A.J. Hull & T.H. Zabel, University of Arizona

Coptic textiles, comprising one of the largest groups of archaeological textiles, are not dated securely. Despite great strides
made in classification and seriation, Coptic textile historians have not succeeded in developing a well-grounded chronology. The lack of dated Coptic textiles has made the task even more difficult. Since these textiles often form the basis of museums' holdings in Coptic art, they have not been considered for radiocarbon dating heretofore. The development of a small sample capability by tandem accelerator mass spectrometry offers the potential for obtaining greater precision for this valuable group of textiles.

Samples were obtained from three Coptic textiles, two of which are located in the Nelson Atkins Museum of Art and one in the University of Missouri Museum of Art and Archaeology. The two Nelson Atkins samples were taken from the outer edges of plain woven flax fabrics forming the support for applied tapestry ornaments, a roundel and a clavus. It was assumed that the wool tapestry ornaments and their flax hosts were within fifty years of each other in age and the warp and weft yarns were contemporaneous. The third sample was obtained from an all wool plain woven patch removed from a tunic fragment during conservation.

Targets were prepared from the samples and subjected to analysis by tandem accelerator mass spectrometry. Serving as standards for the Coptic textile targets were four targets from bristlecone pines, dated A.D. 1890 and A.D. 700 by dendrochronology.

Results of the testing do not confirm existing assigned dates for all the textiles. The least variation occurred with the wool tunic patch and the greatest with the roundel fabric. The implications of these findings for Coptic textile chronology and tandem accelerator mass spectrometry are examined.

OPTICAL AND ELECTRON MICROANALYSIS
OF SAFAVID PERIOD PERSIAN TEXTILES

Ian R. Hardin & Frances J. Duffield
Auburn University

The purpose of this research was to establish by optical and electron microanalysis the nature of metallic threads found in a collection of textiles woven in Persia (Iran) during the 17th, 18th and 19th centuries. These textiles of silk contained yarns wrapped with very fine ribbons of metal.

The microanalysis was done by optical stereomicroscopy, scanning electron microscopy (SEM), and by energy dispersive analysis of x-rays (EDAX). The optical microscopy was used for detailed analysis of weave and yarn structure and for preliminary investigation of the metallic yarns. Detailed examination of yarn structure was done by SEM. The EDAX spectrum of each yarn was obtained and the principal peaks identified as to probable elemental origin. Known samples containing specific elements were run to insure correct identification of energy levels. Microphotographs of the specimens were taken in the backscattered and secondary electron mode, and in the x-ray mode with specific energy filters in place. The superposition of the two types of microphotographs created elemental location maps.

The results are of great interest, both from an aesthetic and an historical point of view. The microscopic views of the textiles revealed the intricacy of the fabric and yarns. The SEM and EDAX results showed that the metallic yarns were silver, often alloyed with gold. Various other elements present, such as mercury, sulfur, and molybdenum, were
indicative of separation techniques, degradation modes, and possible origins of metals used in the metallic windings. The techniques hold promise for improving the knowledge of provenance of historic textiles, particularly those with metallic yarns.

THE USE OF EAGLES AS A DECORATIVE AND SYMBOLIC MOTIF IN 19TH CENTURY AMERICAN COVERLETS

Clarita Anderson & Jo B. Paoletti, University of Maryland

The purpose of this project was to survey and analyze patterns of use of the eagle as a motif in American coverlets and to compare those patterns with the use of eagles in other artifacts. By using a form of computer-assisted content analysis, the researchers were able to statistically test some hypotheses concerning observed patterns. In addition, the use of a file management program for qualitative information permitted comparisons and cross-indexing using a large sample of coverlets.

The sample was created by collecting photographs of coverlets which used the eagle motif as part of the field design, border or corner block. Most of the photographs were taken by the researchers or at their request. These included coverlets in the Ken Colwell Collection, the DAR Museum, the Art Institute of Chicago, and the Merrimack Valley Textile Museum as well as other large collections. Coverlets which were illustrated in books and articles were also included, if the photograph contained all the necessary information and did not duplicate items in the existing sample. The resulting sample was comprised of 223 coverlets.

Information on each coverlet—date, weave, eagle type, location, etc.—was recorded on index cards. The entire information base was then transferred to a computer data base so it could be sorted and manipulated more easily. Contingency analysis was used to test the perceived relationships between some variables, including eagle location, place of origin and date.

Only one of the tested relationships was found to be significant, that between the place of origin and the location of the eagle, suggesting some geographical variations in style existed. The descriptive content analysis permitted by the computerized information base was extremely helpful in identifying weavers who used similar designs and in mapping geographical and chronological patterns of the use of eagles in coverlets.

The eagle was a popular motif in American decorative arts in the early 19th century. Its use in coverlets was most prevalent from 1830 to 1840, somewhat later than the apparent patterns of use in furniture. The introduction of the jacquard loom appears to have allowed the use of eagles and to have been an important factor in their appearance in textiles. The techniques employed for this project, particularly the combination of descriptive and inferential statistics and the use of a computerized information base proved to be powerful research tools.

EMBROIDERY PATTERNS ON GREEK FOLK COSTUME OF ATTICA

Linda Welters, University of Rhode Island

Women in some parts of Greece wore traditional dress well into the 20th century. One region which is interesting for the study of folk
costume is Attica, the group of villages around Athens. Particularly
notable are the elaborately embroidered hem borders of the simply cut
chemises, or underdresses. Although the embroideries vary greatly in color
and design, no study has been made of the many different arrangements of
design elements.

The major goal of this study was to learn the reasons behind the
variation in designs in the embroideries. Specifically, questions the
study attempted to answer were:

1. What are the variables in color and design of Attica
   embroideries?
2. Is the variation in the embroidery of the bridal/festival
   costume of Attica due to differences in village patterns?
3. Are some embroidery patterns on chemises from Attica older
   than others?
4. Did individual embroideresses exercise "artistic license"
   when embroidering chemises in Attica?
5. Have the embroideries of Attica developed from naturalistic
   designs to abstract designs over time?
6. Are differences in embroidery design in Attica chemises due
   to differences in age and circumstances of the wearer?

The research project was funded by the Center for Field Research, an
affiliate of Earthwatch, an organization which recruits volunteers who
contribute both time and money to the project. Thus, the research design
included participation by three teams of volunteer researchers as well as
the principal investigator.

To answer Question 1, Attica embroideries in five Greek museums and
two antique shops were studied. A total of 38 costume pieces were
photographed and cataloged on pre-printed worksheets. In addition,
volunteers searched the library and photo archives of the Benaki Museum for
supporting material.

To answer Questions 2-6, tape recorded interviews with elderly women
were conducted in Greek using a standard list of questions. Photograph
albums with images of embroideries from Attica were shown to interviewees
to stimulate discussion and responses were recorded on data collection
sheets. A total of 72 women in 16 different villages were interviewed.
Many of the interviewees still owned costumes and embroideries from dowries
and old family photographs which were photographed for later analysis.

After the data were collected, a two-part analysis was conducted. The
first part involved information from visual sources. The worksheets
collected for Question 1 were evaluated to determine design and technical
features of the embroidery. Photos and slides were labeled and grouped to
study common elements. The second part of the analysis focused on data
from oral sources. Responses to the photo album were tallied and analyzed
and taped interviews were transcribed from Greek to English, weighed for
validity, and studied for relevant data.

Answers were obtained for the questions posed earlier. The variables
of design were determined to be height of the embroidered area, number of
horizontal bands, presence of vase motif, motifs in narrow borders, degree
of abstraction, and colors used. Variation in color and design of
embroidery was due to four factors: sub-region of origin (as opposed to
individual village), year of manufacture, individual creativity of the
embroidereress in creating the design, and age and economic status of the
woman for whom the chemise was embroidered. Some of the embroidery
patterns were older and more naturalistic than later examples. However,
there were exceptions to the postulation that designs went from
naturalistic to abstract over time due to the way the design was applied to the fabric (drawn in ink first or free-hand embroidered).

Unanticipated information on the transition from traditional dress to fashionable dress was revealed as the interviews progressed. Certain parts of the costume were abandoned well before others and some geographic areas gave up traditional dress earlier than others.

THE EFFECT OF SPECIALLY DESIGNED GARMENTS ON THE OBSERVABLE MAKE-BELIEVE PLAY BEHAVIOR OF FOUR- TO SIX-YEAR OLD FEMALES

Susan L. Davis, Virginia Polytechnic Institute & State University

Nonverbal messages conveyed by dress are learned earlier by today's children than they have been at any time in the past. Dress is a medium for carrying out the serious roles of life, but it is also a medium of play. Numerous studies have investigated play, but few have included dress as a factor.

Research has shown that not all children participate in all forms of play behavior, particularly dramatic play, which contains elements of make-believe. Furthermore, research has shown that increased associative fluency in preschool children is dependent specifically on the occurrence of make-believe play. A child, deficient in such divergent-thinking skills, would seem somewhat disadvantaged and less able to cope with a problematic environment.

The present study sought to determine if specially designed clothing would raise levels of observable make-believe behavior among preschool children. Specifically: Would there be differences in player/nonplayer imaginativeness scores while wearing control vs. experimental garments? and, Would there be differences in player/nonplayer imaginativeness scores while wearing one of two experimental garments?

Two experimental garments were designed for the research based on separate principles. The Make-believe Concept Garment was designed to directly encourage make-believe play, while the Manipulative Concept Garment was designed to approach make-believe in a purely associative context.

Subjects for the study were 36 females, aged 4 to 6. Subjects attended two 1 1/2 hour free-play sessions with a maximum of three other children. Minimally structured toys were provided in a defined play area and all sessions were videotaped. After the first session in which a control garment was worn, subjects were given tasks from a measure of divergent-thinking. For the second session, each child wore one of the two experimental garments.

Videotape assessment by two independent judges yielded both quantitative and qualitative assessment of make-believe behavior. From tapes of the first session, subjects were assigned player or nonplayer status based on the percentage of time spent in make-believe play.

Hypotheses were tested using analysis of covariance, controlling for divergent-thinking score, fluency, and age. In answer to the first question, there was a significant difference between the imaginativeness scores of players and non players as well as between the control and experimental garments. However, there were no differences between the two experimental garments.

The present research has contributed empirical evidence on the effect
An increasing amount of evidence attests to the relative importance and impact of physical attractiveness in first impression situations. One factor perceived to decrease one's self esteem and social acceptability and to be detrimental in first impression situations is that of obesity. Our culture regards obesity as physically unattractive and socially undesirable. Numerous studies verify the negative perceptions of fat persons, but little research has investigated factors that can elevate these negative impressions.

This research was designed to investigate the effect of clothing style differences on the perception of women in three different weight groups. The sample consisted of two groups: 94 college women and 95 professional women. Subjects viewed 12 black and white slides depicting female models of three different sizes dressed in four different clothing styles. Subjects rated each model dressed in each clothing style on 13 personal characteristic scales and on a two-item Interpersonal Attraction Scale. Hypotheses were formulated to test differences between women in the three weight groups and personal characteristics/interpersonal attraction and between women dressed in four different clothing styles and personal characteristics/interpersonal attraction. Additional analysis determined if there were differences between groups on any of the variables.

Analysis of variance indicated there were significant differences between the rating of models as a function of weight for only seven of the 13 personal characteristics and that weights of the models made no difference in ratings on the Interpersonal Attraction Scale. In contrast, clothing styles very strongly and consistently influenced the rating for all variables. The rating for each model on every scale of evaluation significantly increased as the fashionableness and status of the clothing style worn increased, regardless of size of model. This progression of higher ratings was particularly pronounced for the largest model. The analysis also revealed that professional women generally perceived clothing styles and models more favorably than did college women.

Overall, these results indicate that no woman, fat or thin, can afford to dress poorly if she is to make the best possible impression; however, it seems particularly critical for the large-sized woman to dress attractively and fashionably if she is to create a favorable impression.
romantic, and classic female appearance styles. An appearance-situation instrument was used to elicit forced choices among line drawings depicting each of the styles in four hypothetical situations designed to represent varying levels and types of behavioral constraint: (a) a apartment clubhouse gathering, low social; (b) a cocktail party at the home of a colleague, moderate social; (c) a weekly staff meeting, high occupational; and (d) an average working day, varying occupational. Specific choices were hypothesized for each situation. The Myers-Briggs Type Indicator (MBTI), Form G, was used to designate continuous psychological preference scores on the following scales: extraversion/introversion, sensing/intuition, thinking/feeling, and judgment/perception.

Response to the appearance-situation instrument and the MBTI were obtained from 170 (47.22%) male and 190 (52.78%) female students who attended selected university classes during January and February, 1983. Most of these students were Caucasian (92.78%) residents of Virginia (79.17%) who were between the ages of 18 and 24 (97.78%). They were primarily upper classmen (74.17%) enrolled in diverse areas of study. They also exhibited a wide distribution of preference scores on each of the MBTI scales.

Chi square tests were used to examine relations among male choices of appropriateness and female preferences for wearing. For three of the situations (clubhouse party, cocktail party, and average working day) selections were significantly (p<.003) dependent upon gender. Z-tests were then employed to compare male and female choices with those that were hypothesized. For both male and female data, hypothesized selections were confirmed (p<.003) as follows: (a) clubhouse party, dramatic or romantic; (b) staff meeting, classic; (c) average working day, sporty or classic. Females were more likely (p<.001) to choose the predicted romantic style for the cocktail party; males were not. Separate multivariate analyses of variance, by gender and situation, were computed to investigate relationships between appearance choices and psychological preferences. None of the multivariate F's were significant (p<.05).

Results of this study indicate situational circumstances override personality influences in selection of dress. An inverse relation between situational constraint and appearance variance existed; subjects perceived a wider range of appropriate choices when constraint was minimal rather than strong and under minimal and ambiguous constraints, appearance selections were dependent upon gender. These findings imply that "audience pleasing" behavior, expressed through clothing, should consider gender of the observer.

SOCIOECONOMIC AND DEMOGRAPHIC DETERMINANTS OF EXPENDITURES FOR CLOTHING-RELATED SERVICES

Janet Wagner, University of Maryland

One important component of clothing consumption is expenditures for the maintenance of clothing. While many garments are cared for in the household, others are serviced commercially. Reasons for purchasing commercial clothing services include lack of appropriate equipment such as washers, dryers, sewing machines and irons; lack of skill; time limitations, which preclude home maintenance; and garments which require commercial servicing due to fiber content or construction details. The purpose of this study was to determine the effectiveness of socioeconomic
and demographic variables in determining expenditures for clothing-related services by families.

This research was based on a subsample of expenditure data collected from 3,007 families as part of the 1972-73 Consumer Expenditure Survey. Independent variables included total consumption expenditures (a proxy for income), family size, and the age of household head. The remaining independent variables were: family type, region of residence, city size, home tenure, employment status of the spouse, and the education, occupation, and race of the household head. The dependent variable was annual expenditures for clothing-related services, including dry-cleaning, coin-operated laundering, diaper service, and alterations. Tobit regression techniques were used to analyze the relationship between the independent and dependent variables.

The model used was significant at the 0.01 level in determining expenditures for clothing-related services. The $R^2$ was 0.13. All of the sets of independent variables were significant, as was the continuous variable total consumption expenditures. The income elasticity of expenditures for clothing-related services was 0.75.

The following conclusions were reached: 1) Although the model was significant in describing family expenditures for clothing-related services, a large percentage of the variance remained unexplained; 2) Variables such as total consumption expenditures, family type, region of residence, city size, and the occupation, education, and race of the household head had significant effects on family expenditures for clothing-related services; and 3) As total consumption expenditures increased family expenditures for clothing-related services increased, but not as rapidly as the corresponding increase in total expenditures.

SYMPOSIUM ON COMPUTER TEXTILE & CLOTHING APPLICATIONS

COMPUTER SIMULATION: FASHION RETAILING

Laura Jolly & Grovalynn Sisler
Oklahoma State University

Computer-assisted management is rapidly becoming accepted as a means of improving decision-making in the business world. Students preparing for careers in the retail industry should become familiar with the computer's role in retailing. Students should be given the opportunity to interact with and use the computer in situations representative of those they will face on the job.

A survey of retailers was conducted to identify uses of the computer and computer-generated information in store management. Data from the survey were used to develop two simulations which allow students to interact with a computer in realistic situations. Both simulations were developed for use on a Digital Equipment Corporation VAX 11/780 mini-computer.

The six-month planning simulation allows students to manipulate a given set of data with the goal of generating an optimal six-month plan and to receive management evaluation of the plan. The plan includes projected dollar sales, end of month inventory, reductions, beginning of month inventory, planned purchases and gross margin.
The unit and dollar control simulation allows students to monitor sales and stock levels in an on-going department and to alter these levels to meet merchandise demand for a six-month period. Students monitor 30 stock keeping units (SKU's) representing two classifications of merchandise. Students are presented stock and sales information and inventory control via the CRT. Information for analysis is available in both a summarized form and a very detailed form. With a near over abundance of information, students must deliberately search for the information required to make department management decisions. Students can mark down merchandise and/or vary stock levels to determine the effect selected changes will have on total department sales.

SELECTING AND USING FILE MANAGEMENT SOFTWARE FOR INDEXES, BIBLIOGRAPHIES AND CATALOGS

Jo B. Paoletti, University of Maryland

The advent of microcomputers has offered the promise of making information-processing simpler and less time-consuming. It offers that promise, however, at a high price in terms of equipment and investment of time to learn to use them. The purpose of this paper is to discuss factors involved in selecting and using one of the most popular types of software, file management programs.

A file manager is essentially an electronic filing cabinet. Some are quite specialized, such as those designed to organize museum collections, create bibliographies and catalog libraries. Also available are general purpose file management programs which permit the user to design unique files and forms for each application.

Most file management software has four features in common: file, search, sort, and print. The filing function allows the user to enter, change, and delete records. The search function permits selection of records meeting certain criteria. Most file managers can at least sort the file in alphabetical order. Finally, all file management software allows a printer to create paper copies.

Not all file management programs function equally well. Some can search only one field at a time, others permit the use of multiple criteria. Sorting speed can vary a great deal, from programs that can sort a data base of six hundred records in less than a minute to others that take two hours to sort half that number. Not all programs allow the user to design forms for printout or display. Some programs automatically provide a file structure that cannot be altered. Not all programs allow the user to change or rearrange field headings. Storage capacity in file management software varies, from 500 records per disk to nearly 2000. Software that can continue files on more than one disk will provide even more storage space. A data base program, which is a file management program with mathematical functions, is useful if calculations or totals are desired.

Before buying any file management software, it is important to decide what functions and capacities are needed. How many items will be entered? How many categories, or fields, will be used? How long will the entry in each field be? Some things are more efficiently left in manila folders and retrieved by hand.

It is desirable, if possible, to try out several programs before making a purchase decision. Computer users' groups can be very helpful;
computer and software stores are beginning to provide "test-drives" as well. Choosing file management software is not difficult, but must be approached with a thorough understanding of the work to be done and the features available.

COMPUTERIZED STAIN REMOVAL

Suzanne Loker & Karen E. Kyllo
University of Vermont

Removal of a myriad of stains from any of a wide variety of fiber and fabric types is a request often received by county and state Home Economics Extension personnel. Many reference sources have been published which detail methods for removing stains from fabrics. However, looking for the correct method each time a client requests information is time-consuming and often involves having to return the client's call at a later time, writing a letter explaining how the stain can be removed and also explaining general information about removal of stains. Time required answering these requests can be greatly reduced by providing a computer program for information retrieval and dissemination in appropriate formats.

The Objectives of this study were to provide a method for computer retrieval of stain removal information which would decrease needed time for answering stain removal questions; provide user-friendly software which could be run by individuals with minimal computer literacy; and provide a personalized letter to a client outlining general stain removal techniques and detailing the method advised for a particular stain.

The software program was developed in the BASIC language for the Radio Shack TRS 80 Model 12 computer and could be adapted to other BASICs. The program was developed for use by county and state Home Economics Extension personnel, but could be used by other interested individuals.

The software is organized using the format from the USDA Home & Garden Bulletin #62, "Removing Stains From Fabrics". The user is first asked to classify the stained fabric as washable or non-washable. The choice of 10 stain categories is listed. Once the appropriate category is selected, specific stains from the category are listed on the computer screen. The program contains stain removal methods for 154 stains and new specific stains could be added if needed. When the appropriate stain is selected, the program searches the base and prints on the screen appropriate method(s) of stain removal starting with the most preferred method.

The program then provides the operator with the option of printing out a personal letter to the client and a copy of the selected stain removal method(s). Retrieval and printing of all information can be accomplished in 5-10 minutes.

The program has been evaluated by the Home Economics Program Coordinator for the Vermont Extension service and by Vermont County Extension Home Economists. The software program is available from the University of Vermont Extension Service on an 8-inch double sided diskette formatted for a 4.2 operating system.
COMPUTER-AIDED APPAREL DESIGN AS AN INTEGRAL COMPONENT OF APPAREL DESIGN PROGRAMS: JUSTIFICATION AND IMPLEMENTATION

M. Jo Kallal, University of Delaware
Annette Fraser, Utah State University

This project was designed to justify computer-aided design (CAD) curriculum in apparel design programs and to examine how such programs could best be implemented.

Traditionally, apparel-manufacturing computer technology has been concerned with product development from the production viewpoint only, excluding the initial product design, or pre-production phase. While worldwide approximately 1200 apparel companies use computer-aided grading and marking systems, only a small percentage of these companies use computers in the product design area. Participants in a 1983 American Apparel Manufacturers Association sponsored CAD/CAM seminar predicted the apparel industry will follow other industries by increasing CAD implementation.

A potential interaction problem exists between computer technology and the creative human element in the design area. This problem lies in the designer's attitudes toward computer processes, from the automation standpoint as well as a possible threat to creativity. An industry survey indicated designers, patternmakers, and production managers have negative attitudes toward CAD. In the interest of maximizing the pre-production design phase, it is important to build designer acceptance of CAD. Research also indicated that large apparel manufacturers tended to hire designers with college degrees in preference to those with vocational training. Therefore, to educate and market design students from four-year programs for design applications, CAD curriculum must be developed and tested.

The University of Delaware is concerned with development of positive computer-aided apparel design attitudes in future designers as shown by related curriculum development, implementation, and testing. A Gerber Camasco 3000A system with pattern designing, grading, and marker making capabilities provides students with realistic problem-solving situations that incorporate state-of-the-art equipment. Under the implementation component of this project, two CAD instructional strategies are compared via variables of pattern design efficiency, ability to synthesize (mastery), and attitude. Results suggest instructional strategies which can be applied to industrial and educational programs using computer-aided apparel design systems.

APPLICATIONS OF EXISTING SOFTWARE FOR CLOTHING & TEXTILES

Carol E. Avery, Florida State University

Two and one half years ago our department purchased three Radio Shack TRS-80 Model III computers, a Daisy Wheel II printer, and a variety of software packages. We have used this equipment in office management, in teaching, and in research.

Word processing programs are designed to produce written documents such as reports and form letters. They can also be used to prepare examinations, syllabi, advising lists, class schedules, vitae, research
questionnaires, and manuscripts for research journals and other publications.

Profile Plus is one type of data base management system which can store and retrieve almost any kind of information. Individual records can be printed in a variety of formats. These programs can also be used to interact with other systems to create special reports or extended calculations. We have used Profile Plus to develop a student record file which allows us to keep an updated list of majors in the department and to sort and print this list on the basis of several factors or groups of factors. A second application has been with the Historic Costume Collection. A coding system has been developed and records are being entered into the computer. Again, the data may be searched, sorted, and printed on any combination of one to three variables. The third application has been the development of an index to include the Home Economics Research Journal, the Clothing & Textiles Research Journal, and, eventually, the ACPTC Proceedings. Bibliographies are also being prepared for a number of graduate level courses. The fourth application has been the development of a membership list for Omicron Nu. The names of new initiates are entered into the computer each semester, then sorted alphabetically by last name, major, and/or initiation date.

Visicalc is an electronic spread sheet which consists of a grid of columns and rows. It can be used much as a calculator is used to manipulate large groups of numbers. We are currently using this to keep enrollment figures and to calculate FTEs. Other functions include the creation of budgets, sales projections, costs estimates and merchandising plans.

A user-oriented data analysis system, Advanced Statistical Analysis, is useful for classroom projects, especially in textiles, simple problem-solving, or preliminary research analysis. The program includes analysis of variance, chi square, time series analysis, t-tests, correlation, and linear regression. It will also generate frequency distributions, histograms, and samples of random numbers.

The authoring programs, Author I or II allow an operator to write a lesson and to ask questions about it. Tests can be created that require the student to write-in answers or to select the correct answers (multiple choice). The program also has scoring capabilities which provide the number of right or wrong answers, the time required to complete the lesson, item analyses, and subgroup evaluations. It can control the number of times the student can repeat the test, weight the answers, and provide branching capabilities. Such programs provide an addition to classroom instruction and make it possible to administer tests at a student's convenience.

Time Manager is used weekly to update the calendar of events and to create a prioritized list of tasks to be accomplished. Entries can be changed and priorities and categories can be adjusted to reflect changes in work loads.

COMPUTER TECHNOLOGY OR BUST: FUTURE DIRECTIONS FOR CLOTHING & TEXTILES

Suzanne Loker, University of Vermont

A survey of the ACPTC membership for present hardware and software use and a review of literature of the history of computer technology provided the content for this report.
Sixty-one surveys were completed and returned. Reported software fell into three categories in addition to use of commercial word processing, data analyses, and management programs: 1) commercial software adapted to clothing and textiles needs such as documenting costume collections and graphics; 2) programs created for computer assisted instruction (CAI); and 3) programs created for administration of a clothing and textiles department task such as intern bidding system and textile lab inventory. The Apple IIe, IBM PC (and XT), and Radio Shack TRS-80 were the most frequently available microcomputers to students and, on the average, departments had three microcomputers.

The review of the history of educational computer use revealed: 1) In 1924 the first grading machine for multiple-choice tests was developed; 2) Florida State University used one of the first interactive computers and CAI languages in the late 1950s; 3) In 1958/59 BASIC, the first simple, interactive language was developed; 4) In 1965 the first generation of computers using integrated circuits allowing decreased size were developed; 5) CONDUIT, a consortium of 15 institutions of higher education, was organized to acquire, develop and distribute CAI materials. One current goal is to encourage a single operating system for all hardware; 6) 1977 marked entry of the first microcomputers on the market; and 7) In 1984 many colleges and universities were shifting educational computing classes to microcomputers and departments were buying their own microcomputers and encouraging student use of microcomputers.

Computers can help gather, organize, and disseminate information, but evaluation of information will remain a human expertise. Computers should be used for appropriate tasks that save time and tedium and will not replace individual thinking and creativity.

The following recommendations were made: 1) Know individual campus facilities. Let computer science departments teach computer skills so textiles and clothing instructors can teach subject content. Use computer facilities when a process cannot be done easily by some other method; 2) Use trained programmers to do programming for a particular need and require that software be user-friendly; 3) Cooperate with the author in starting a network to seek others working in areas of interest to you and to cooperate in software exchange; 4) Overcome fear--others in education are just learning about computers also.

INNOVATIVE TEACHING REPORTS

PROMOTION CAMPAIGNS FOR RETAIL CLIENTS

Sandra Forsythe, University of Georgia

As part of their coursework, fashion merchandising students are providing consultation services to small retail firms. Students prepare promotion campaigns including advertising, display, publicity, special events and public relations for clients who have requested assistance from the Small Business Development Center. Working in small groups, students develop a total annual promotion program and present their recommendations to clients at the end of the quarter.

This innovative project allows students to apply concepts and theories learned in class to business situations in which their expertise is sought. The primary purposes of this project are to give students opportunities to
apply textbook concepts and theories to actual business decisions, gain experience in the business world, develop a better understanding of human relations, and gain confidence for future employment situations requiring similar skills and knowledge. An additional purpose is to foster better liaison between the academic and business communities by meeting needs of both.

The project's major steps involve collection and analysis of pertinent information about a small business, preparation and development of a promotional budget, objectives, and strategies which will achieve the greatest return for advertising dollars spent, and development of techniques to measure the effectiveness of the campaign. Finally, students make formal presentations to their clients.

Guidelines for the project were developed in cooperation with The Small Business Development Center and first implemented with one fashion merchandising student as a part of an independent study during the summer of 1983. The project was evaluated and modified during fall of 1983 and implemented with four retail clients and a class of 22 seniors in fashion merchandising during spring of 1984.

Responses from students and clients were positive. Students indicated they learned a great deal from the experience and that it was more valuable than a project dealing with a hypothetical situation. Clients believed the campaign recommendations were very helpful and planned to incorporate several of them into their promotional programs. The Small Business Development Center responded that the project was valuable in both assisting and educating owners of small businesses and encouraged continued implementation of the project.

TEACHING COMMERCIAL APPAREL PRODUCTION

Susan H. Weaver, Auburn University

A new course, Commercial Apparel Production, was developed to meet educational needs of fashion merchandising, clothing design, and vocational home economics education majors. After several years of being taught as a component of another clothing construction course, this content was expanded into a three credit course to focus on commercial apparel production.

The lecture portion of the course (1 hour per week) included information concerning the history and development of the ready-to-wear industry, the adoption of a pattern for production, costing, quality specifications, and the Federal Stitch & Seam Classifications. Additional information was presented by guest lecturers from apparel and equipment industries. A site visit to an apparel manufacturing facility was used to reinforce class lectures.

Written assignments included critiques of assigned articles from Bobbin Magazine. Additional reading assignments were from Inside Fashion Design by Sharon Tate. Students were evaluated by midterm and final examinations.

The lab portion of the course (4 hours per week) was designed to provide students with sewing experience using basic commercial sewing equipment donated by Russell Corporation, Pfaff and Pegasus. A series of samples were used for students to acquire machine operation skills. Time and motion studies were done to evaluate skill level. The first project
was production of a tote bag requiring use of lockstitch, overedge, safety stitch, and coverstitch machines. Each student was required to thread, operate, and care for all machines. The major project was assembly line production of eleven knit warm-up suits. Each student was responsible for four or more production tasks including cutting, bundling, ticketing, seaming, overedging, pressing and finishing operations. Overlap of production tasks occurred because class size was relatively small, but did allow students to increase skills in more areas.

AN INNOVATIVE APPROACH TO TEACHING FASHION ILLUSTRATION

Carol Ann Honeycutt, Virginia Polytechnic & State University

The structure and concepts developed in fashion illustration are not available in the literature, nor are they commonly taught in home economics courses of fashion illustration. Concepts, techniques and slides have been developed which encourage students to develop abilities to communicate visually, apply knowledge of design and understand fashion illustration as an art form. Success of students' work in fashion illustration has brought recognition from across our campus. In many cases, students have been able to produce work of professional quality during their first quarter of classwork.

Fashion illustration is intended to develop students' abilities to observe and delineate fashion concepts, communicate visually with others in the fashion industry, provide skills in illustration which enable students to express and promote original designs, refine students' abilities to critique fashion illustrations, appreciate fashion illustration as a form of artistic expression, and recognize design possibilities in the process of illustration.

Prior to 1983, the media and form common to fashion illustration was relatively static. Within the past year, media and form of fashion illustration have evolved in style and use of color. Innovative methods within the class have resulted in students' enjoyment and realization of their abilities to produce work near professional quality. In addition, use of innovative media may have a long-term impact on the fashion illustration profession.

Three innovative approaches contribute to the success of the class: 1) students spend approximately 50 hours/quarter in concentrated and intense drawing of live models; 2) portfolios of student work are reviewed on a one-to-one basis with feedback to students emphasizing and encouraging observation and accurate drawing; and 3) students are introduced to innovative media and encouraged to develop new media for use in projects.

Student semester-end evaluations of the class average three points on a four-point scale. However, the highly professional quality of work produced by students most accurately reflects success of methods used.

COMMUNITY INVOLVEMENT IN CLOTHING FOR SPECIAL NEEDS

Nora M. MacDonald, West Virginia University

A problem-solving approach is used by students in a clothing for special needs class designed to apply textiles and clothing concepts to
meet needs in special clothing design, marketing, and education. The primary objective of the class is to enable students to apply textiles and clothing subject matter to actual clothing for special needs problems at all community levels.

Each student conducts an innovative project after an examination of historical developments in the field, special clothing resources, functional limitations that affect clothing design, and research in the field. Student projects may relate to the design, adaptation, or marketing of special clothing, the education of professionals in other fields, or teaching textiles and clothing to disabled individuals. Ideas are generated, a topic is selected, and background reading in supporting areas is conducted. Alternative solutions are developed and evaluated. A final solution is then prepared, presented, and evaluated by the appropriate person(s) or group(s) in the community. Careful supervision is provided throughout the process.

Students may explore a topic individually, as a team, or the total class may examine different aspects of a topic. Community contacts are made by the instructor so that students can work directly with clients. Local community resources include the Easter Seal center, nursing and convalescent homes, hospitals, a rehabilitation training and evaluation center, a vocational rehabilitation office, secondary schools, and the Downtown Merchants' Association. Statewide resources include a rehabilitation center, the School for the Deaf and Blind, a mental hospital, the Director of Vocational Home Economics, a rehabilitation association, and home economics personnel. National resources at this point include a rehabilitation agency, a hospital and a pattern company.

In some cases, a research problem is generated one semester and the idea is expanded the following semester through a more detailed examination of the problem. This may lead to a more involved project with voluntary assistance from graduate students. Project continuation also is enhanced by developing and maintaining community contacts. This is facilitated by the instructor being an active member of the rehabilitation community.

Response from both students and the community to this eleven-year-old program has been extremely satisfying. Approximately eight to twelve students enroll in the course annually, including seniors in textiles and clothing and graduate students in homemaker rehabilitation. Many of the textiles and clothing students enter the course with apprehension about working with disabled individuals. They leave with an understanding of special clothing problems and solutions, a greater appreciation of individuals with special clothing needs, and the ability to work with special customer needs in a retail establishment. Several students have expressed interest in working in this area professionally.

Homemaker rehabilitation graduate students provide balance to the fashion-oriented students. They are able to apply coursework in their program to the experiences in this class. Several of these students have elected to expand research topics undertaken in class to non-credit research projects the following semester. This has resulted in eight co-authored publications including five abstracts and three articles.

The response from all community levels is encouraging. A greater awareness of the need for special clothing has developed and has led to action in many cases.
PUTTING STRETCH INTO SPORTS

Nancy E. Breen, Syracuse University

Basic textile concepts can be illustrated vividly through examination of changes in athletic uniforms. A presentation has been developed for an introductory textiles class that details the evolution of athletic clothing. Slides, fabric samples and university team uniforms provide students with examples of how fabrics can be engineered for specific end uses. Some concepts included are: 1) Stretch is illustrated through woven wool pants worn by Babe Ruth compared to tight stretch knits of today's baseball players; 2) Absorbency is illustrated through hydrophilic silk swim suits worn by the 1932 U.S. Olympic Team and the faster hydrophobic spandex/nylon suits worn by the 1984 team.

Research has been conducted to enhance this lecture. Fiber samples have been taken from uniforms in the U.S. Olympic Hall of Fame, the Baseball Hall of Fame, the Basketball Hall of Fame and the Pro-Football Hall of Fame. Several manufacturers have been contacted for the latest information on modern athletic fabrics.

Media interest in the topic has brought attention to the College and textile information to the general public. Evaluation of test questions covering these concepts indicate students remember the information. Also, student reaction during and after presentation is always extremely favorable. Research in this area is continuing.

POSTER SESSION REPORTS

PHYSICALLY DISABLED CONSUMERS' PERCEPTIONS OF SELECTED CLOTHING TOPICS

Jane M. Lamb, University of Delaware

Although much of the recent research on clothing for the handicapped and/or elderly has focused on clothing preferences or needs, disabled individuals' perceptions of the importance of clothing to independent living have received less attention. The purpose of this study was to explore the necessity of 10 clothing-related concepts (personal care/upkeep of appearance, features that make ready-to-wear easier to use, retailers who carry products for the disabled, clothing selection for protection and safety, clothing selection for easy-on and easy-off features, clothing care, basic clothing construction techniques, adapted clothing patterns, adapted sewing equipment, use/adaptability of sewing machines) to independent living as perceived by individuals having physical disabilities. Specific objectives were to obtain ratings of each concept's importance to independent living, ascertain amount of information previously received concerning each concept, and identify clothing information desired by physically disabled individuals.

A telephone interview procedure was developed. For each clothing-related concept, respondents were asked to rate the item's necessity for independent living on a five-point scale (1=not needed, 5=absolutely necessary). They were then asked to indicate the amount of information previously obtained about each concept on a five-point scale (1=none, 5=great deal). Participants were also asked how they had obtained
information, whether they desired additional information, and preferred sources of such information.

Twenty-two physically disabled adults between the ages of 18 and 64 years comprised the voluntary sample. Fourteen females and eight males who varied in age, employment status, income group, and physical disability answered requests for participation disseminated through a variety of news releases.

Concepts of personal care, retailers who carry special products, and clothing selection were rated as necessary or absolutely vital by over half the sample. Clothing care and sewing-related topics produced no clear response patterns.

When responses concerning the importance of concepts were compared with responses regarding amount of information received, several "information gaps" were observed. Over half the participants said they had received no information since becoming disabled about the following areas: features that make ready-to-wear easier to use, retailers who carry products for the disabled, selection of clothing for protection and safety, selection of clothing for easy-on and easy-off features, clothing care, and the sewing-related items. The majority of respondents desired information in each of these areas, with the exception of sewing-related concepts.

Respondents cited a variety of sources for information they had received; family members, rehabilitation personnel, teachers, and specialized support groups. Assorted general and specific sources were preferred as means of obtaining information about clothing-related topics; printed materials were cited most frequently.

Findings of this study suggest that clothing-related concepts are considered important aspects of independent living by physically disabled individuals. Upkeep of appearance and what to seek in clothing are of particular interest; information about these is desired and would be appreciated by participants in this sample. They may represent only a few of the many physically disabled individuals who would appreciate learning of new clothing developments, wardrobe suggestions, or related information.

READY-TO-WEAR VS. HOME PRODUCED CLOTHING: AN APPLICATION OF A HOME PRODUCTION ACTIVITY MODEL

Suzanne Loker & Alma Owen
University of Vermont

For today's men and women who are meeting demands and seeking rewards of jobs, families and personal enrichment, money is only one consideration in wardrobe choice. Persons want clothing that is comfortable, is convenient to care for, and makes a statement about them. For persons who have or can acquire home sewing skills, the analysis of wardrobe selection can be broadened to include facets such as personal growth and enhanced self expression.

This study adapts Beutler & Owen's (1980) home production activity model to compare ready-to-wear and home produced clothing. This model uses an input-output framework to analyze clothing selection: the inputs are the human and material resources used to acquire clothing; the outputs are the satisfactions a person realizes through the processes of acquisition and use of garments.

Between the input and the output is the throughput individuals use to match available resources to satisfactions sought. This throughput is a
continuum of the potential processes used to fulfill clothing needs. The processes vary from intensive home production—where clothing might be designed, woven, and constructed—to market purchase—where clients tell a consultant where they are going and appropriate garments are chosen, purchased and delivered to them. Clothing acquisition falls between these two extremes for most consumers. This study focuses on the middle area in its comparison of monetary and personal costs and benefits of clothing acquisition.

A classic dress and coordinating jacket style were chosen to standardize the cost comparison of home produced clothing from commercial patterns to ready-to-wear garments. Three price ranges (high, medium, low) of the outfits were compared.

For the home produced items, two garments were constructed in each price range and costs of inputs averaged to control for seamstress individuality. Inputs for each garment included time costs for travel, shopping, initial construction, fitting, and alteration. Money costs included pattern, fabric, notions, mileage allowance and equipment depreciation. In the proscribed price ranges, assistants procured ready-to-wear outfits similar in style to the home produced clothing. Time costs for these garments included travel, selection, trying on and purchase of the item. Money costs were the price of the garment and mileage allowance.

Inputs were compared using chi square analyses highlighting usefulness of monetary measures for resource decisions.


MODERN DESIGN HISTORY AND FASHION MERCHANDISING

Grant Greapentrog, Drexel University

Fashion merchandising students find that a course in the history of costume relates directly to their professional preparation. As merchandisers, however, much of their attention may be concentrated on non-apparel items such as furniture, lighting, appliances, tableware, and other similar consumer items which have an historical and stylistic component. The student who is aware of these items will be better prepared for a successful general merchandising career.

A course which concentrates on these examples of well-designed artifacts provides students with an exposure to both popular and avant-garde styles of furnishings during the past 125 years, an understanding of change in design attitudes which affected stylistic developments as seen in these artifacts, an awareness of similarities and differences between American and European examples of objects related in style or date, and an appreciation for well-designed, mass-produced items, their fashion component, their acceptance in the marketplace, and their impact on the merchandising climate of the time.

Fashion merchandising students find that knowledge of these modern consumer items prepares them to be more effective in their profession. Their awareness of these non-apparel items helps them to assess and predict merchandising for today's home furnishings.
ACTIONWEAR FOR THE '80's

Jean McLean & Susan Watkins
Cornell University

Actionwear for the '80's is a Cooperative Extension Program that focuses on clothing for five activities that have become increasingly popular in today's fitness-conscious society: jogging, cycling, aerobics/exercise/dance, racquet sports and swimming. Resources for the program include: 1) A videotape illustrating people engaged in each of these activities and the ways in which their thermal, movement and safety needs can be met by clothing; 2) A series of brochures covering how to select and care for clothing for each of the activities; 3) A loan wardrobe of clothing illustrating good choices for each activity; 4) Fabric swatches of new innovative fabrics used in the field; 5) Slides of current clothing and slide sets illustrating the theory behind thermal comfort, movement in clothing and visibility; and 6) Teaching guides and educational brochures from commercial companies and trade organizations.

These resources are used by Cooperative Extension Home Economists, 4-H leaders and University faculty to reach many diverse groups in New York state such as retailers, Home Economics teachers, health clubs, 4-H clubs, college students and the general public.

MICROPOROUS FABRICS: PHYSICAL PROPERTIES, CURRENT AND FUTURE END-USE

Cynthia L. Money & Beate Ziegert
Cornell University

Physical performance properties and market characteristics of two microporous fabrics (Gore-Tex and Entrant) incorporated in an outdoor clothing system were investigated. Properties examined were bursting strength, tear resistance, seam strength, water resistance after the treatments of oiling, soiling, laundering, and scoring, and moisture vapor transmission after exposure to salt water. A market survey was conducted in conjunction with L.L. Bean, Inc., of Freeport, Maine in order to suggest a demographic profile and examine behavioral characteristics of consumers who purchase a garment/accessory constructed of Gore-Tex fabric. Finally, results of the physical performance investigation and the marketing analysis were integrated to evaluate current end-use and suggest future product opportunities.

Physical performance results indicated that undue abrasion or exposure to salt water could significantly alter performance of both microporous fabrics, specifically properties of water resistance and water vapor transmission. The market survey suggested that consumers who purchase garments constructed of Gore-Tex fabric from L.L. Bean, Inc., are well-educated and upper-middle class professionals who have a significant preference for functional attributes of garments surveyed. Further analysis indicated that L.L. Bean's intended end-use of garments differed from respondents' reported end-use.

Integration of the physical performance evaluation and the marketing analysis suggested that garments surveyed will perform satisfactorily when constructed of Gore-Tex or Entrant fabrics. However, when certain
environmental conditions are encountered, significant alterations in fabric performance may occur.

IMPACT OF HOMEBASED CLOTHING AND TEXTILES AND NON-CLOTHING AND TEXTILES BUSINESSES ON HOUSEHOLDS

Lillian O. Holloman, Howard University

A comparison of clothing and textiles homebased businesses with non-clothing and textiles homebased businesses was conducted to determine the impact on resource allocation and interpersonal dynamics within households. Specific objectives were to construct a profile of homebased businesses and to determine contributions of these businesses to household income, the use of income generated from these businesses, family involvement in these businesses, differences between clothing & textiles homebased businesses and non-clothing & textiles homebased businesses, and if correlations existed between reasons for going into business and age, education and income.

A homebased business was defined as a business based in the home. While transactions may have taken place elsewhere, the individual's home was the base of operation and was where the office was located.

Total sample size was 92 with a subsample of 25 clothing and textiles respondents. This convenience sample was obtained through volunteers identified through local newspaper advertisements and community bulletin boards. All subjects were 18 years of age or older and had been in business at least six months.

Descriptive statistics, t-tests, and Pearson product moment correlations were used to analyze data. Respondents were mostly white females between the ages of 26 and 40 with an education level of high school completion. Business income ranged from less that $3,000 to over $30,000 per year and was absorbed primarily into the general household budget. A large percentage of respondents from both subsamples reported family participation in some aspect of their businesses. Respondents also reported more time spent with family and improved communications. No significant differences were found between the clothing and textiles sample and the non-clothing and textiles sample in overall profile, income from business, use of income from business and involvement of family members. Correlations existed between age and reasons for going into business.

These findings have implications for both education and further research. Education implications suggest exploring the inclusion of homebased business courses into home economics, human ecology, and business curricula. Implications for research include replication of the study using a random sample to determine the effect of geographic location, community type, and state of the local economy on homebased businesses.
THE RELATIONSHIP OF MATHEMATICAL AND LOGICAL SKILLS TO APPAREL CONSTRUCTION AND FITTING COURSES

Wanda Franz, Nora MacDonald & Pat Grocott
West Virginia University

Many students entering beginning clothing construction courses have difficulty with basic mathematical procedures. Clothing construction and pattern alteration require an understanding of the use of a ruler, knowledge of fractions, and the ability to do simple computations using fractions. Although this knowledge is covered in seventh and eighth grade mathematics courses in most school districts, many college students have a poor grasp of these concepts. Objectives of this study were to determine the competency level of apparel construction students in basic math skills and cognitive functioning, evaluate the benefit of a review program in basic mathematics on performance in an apparel construction and fitting course, and evaluate the relationship between mathematical skill, logical ability and performance in an apparel construction course.

Subjects were 23 female college students enrolled in a basic apparel construction and fitting course. All students entered the university with the necessary ACT scores and coursework including high school algebra. Subjects were sophomores, juniors and seniors and were randomly placed in two sections designated as the experimental group (N=12) and the control group (N=11). The experimental intervention employed was a self-paced math training program. Students in the experimental condition were asked to review, on their own time, standard math worksheets drawn from grade school textbooks. Tests administered to both student groups included a 100-item apparel construction and fitting pre- and post-test developed by the instructor, a 13-item Piagetian series of formal operational problems, and a 50-item math pre-test and a 56-item math post-test.

The math tests were developed after an analysis of math concepts used for pattern alteration and basic apparel construction techniques. The test of logical abilities was a set of Piagetian Formal Operational problems taken from a group-administered test developed by A.E. Lawson. The logical abilities problems were demonstrated in front of both student groups toward the end of the semester. Logical analysis was to be used to determine the solution presented.

Only 12 students (N=23) scored above 40 points (70%) on the math pretest, suggesting poor preparation for college level work. On the Piagetian tests, only three students (N=18) performed at adult levels; 39% of the students exhibited concrete reasoning, 44% exhibited transitional thinking, and 17% exhibited formal operational, or adult, thinking.

The experimental and control groups were compared using t-tests. There were no significant differences on pre-test scores between groups; but on the post-test, the experimental group performed significantly better on the math test (p<.04) and the final examination for the course (p<.01). Thus, the intervention improved math skills, contributing to improved performance in class.

Pearson product moment correlations were run between all test items. It was found that construction pre-test scores were correlated with both the math pre-test (r=.50, p<.02) and post-test (r=.51, p<.01). The cognition test correlated with the math pre-test (r=.49, p<.02), math post-test (r=.43, p<.04), and the construction post-test (r=.51, p<.01).
TEXTILE CONSERVATION FOR INDIVIDUAL COLLECTORS

Margaret T. Ordonez, University of Maryland

Results of research in textile conservation have been available to museums and universities increasingly over the past decade. This information, however, is usually not accessed by the general public or volunteer staff members of small historic houses or societies. Many items of varying historic, economic, and sentimental value are in their care and deserve proper storage, exhibition, cleaning, and repair. The purpose of this presentation is to show how textile conservation information is being distributed to people with heirloom textiles stored in their homes and to non-professional staffs of small historic organizations holding textiles in their collections. By sharing the following activities of an Extension textile and clothing specialist, other faculty members may make textile conservation information available to more people in their states.

Since the field of textile conservation is quite broad, one new topic is to be introduced in the state each year starting in 1983-84 with storage, an ever-present need. The specialist produced a television show, a radio program and spots, newspaper articles, mall exhibits, and printed material during this first year. Direct contact has been accomplished by training sessions for docents and volunteers of historic houses, helping a group have a historic fashion show at a state-wide meeting without actually wearing old garments, and speaking to special-interest groups such as quilters. Agent and leader training in safe storage procedures has reached hundreds of other collectors.

No other program offered by the specialist this year has received such enthusiastic response with so much potential for participants to change present practices. In some cases, items of economic value will be better preserved as a result of this program emphasis, but in many instances the textiles and costumes stored in safer ways will last longer to provide their owners with a link to the past and an increased sense of self-identity.

THE HERITAGE PATTERN COMPANY

Clarita Anderson, University of Maryland

Textiles 425, Experimental Processes, is the fourth course in the Department of Textiles and Consumer Economics apparel design core. Goals of the course include strengthening students' technical skills and standards and application of skills and concepts to apparel production and merchandising problems.

One project in the course was formation of a mythical pattern company to make and distribute children's patterns based on historic garments in the department's collection. Students worked in teams of two and each team chose a garment from a pre-selected group of garments. Assigned tasks in the project included development of a pattern from the historic garment, sizing and grading the pattern to current industry standards, documenting the original garment, developing instructions for construction of the garment employing 20th century construction techniques where possible, estimating yardage, planning garment layout, constructing a sample garment, and designing the pattern envelope.
Each of the project tasks required use and integration of skills and concepts from prerequisite courses in addition to planned learnings for this course. Students developed a working relationship with a partner which included both sharing and dividing many project tasks. Students reported in evaluations that they had learned a great deal and a majority indicated they enjoyed the experience.

FASHION MATHEMAGIC

Nadine Hackler, University of Florida

If one needs to manage clothing resources better, the place to start is with what one has. When the doors of a closet are opened, what is found? Is it a collection of clothing items or, is it a planned wardrobe of clothing that is coordinated, can easily be updated, and provides items needed to meet a particular lifestyle?

Coordinating clothing and accessory items is the key to getting the most from clothing resources. The use of FASHION MATHEMAGIC--adding, subtracting, dividing, multiplying--can better accomplish use of all clothing items. Once all clothing in the closet fits a particular lifestyle and is becoming, then creativity can be enjoyed putting pieces together.

One needs to take an honest, objective look at individual needs and lifestyle. This includes knowing what one likes to wear for various activities, and the colors, lines, textures and fabrics designs which are most becoming. Conscious decisions are needed when adding garments to a wardrobe.

The first time an individual seriously reworks a wardrobe can be traumatic, but the result is having clothing which fits needs and which are attractive. A closet or drawer is just an empty space and should work for, not against a well-planned wardrobe. Clothing and accessories cannot be organized when there are "leftovers" that are no longer wearable and/or fashionable.

The purposes of doing a wardrobe inventory and evaluation are to analyze what is on hand, "weed" unwearables, plan (and do) repairs and remakes, identify becoming garments, better organize clothing accessories, have clothing needed for an individual's lifestyle, plan for future clothing acquisitions, and maximize available clothing resources.

Of particular importance is evaluation and analysis of lifestyle--what activities are done, where time is spent, geographic location, climate, and dress appropriate for the community. Having clothing which meets the needs for activities is most important. For some individuals it helps to chart specific activities (day and length of time) for a week or a month. Also, keeping track of types of garments preferred for each activity assists in the evaluation of presently owned clothing. The desired outcome is to have clothing which meets needs.

A personal style can be developed as conscious decisions concerning clothing accessories are made. FASHION MATHEMAGIC can add "magic" to a wardrobe by helping to determine clothing and accessories that are becoming, fit a lifestyle, and are mix and match. Having a planned and coordinated wardrobe helps extend the clothing dollar and allows greater clothing choices.
"Dress Yourself in Color" is the name of a computer program that takes students through the basic steps of color analysis. The student learns how to do color analysis while analyzing personal coloring. Steps in the analysis include identifying skin undertone and coloring of skin, freckles, eyes and hair. The final step is selection of best colors for an individual. Results of the color analysis may be printed in hard copy for the student's personal use. Further class activity such as collecting sample swatches of an individual's best colors can be conducted.

"Dress Yourself in Color" was the first program marketed by Eve Software, a business venture specializing in computer aids for Home Economics. The color analysis program was created and written by Sue Bailey and Ginger Barker and can be used on Apple II+, IIe, and IIc, Franklin, and IBM PC computers.
Meeting called to order at 11:25 a.m. by Elizabeth Rhodes, President

Minutes were read by Nadine Hackler, Secretary and approved.

Treasurer's Report was given by June Mohler, Treasurer. Copy in packet is through September 30, 1984. Balance $17,413.63. Fiscal year ends October 31, 1984. We do have federal income tax status. Report accepted.

Reports

*Nominating: Ja Kallal reported on election
President-Elect: Nora McDonald
Treasurer: Suzanne Loker
ER Representative to National: Kay Obendorf
ER Representative to National to complete Jane Lamb's term: Carole Avery

*Board for 1984-85: Elizabeth Rhodes reported
President-Elect 1984-85: Jo Paoletti
President-Elect 1985-86: Nora MacDonald
Secretary: Nadine Hackler
Treasurer: Suzanne Loker
ER Representative: Kay Obendorf
ER Representative: Carole Avery
Past President: Elizabeth Rhodes

*National Officers from Eastern Regional:
Elizabeth Rhodes reported
President: Joann Boles
Secretary: Jane Lamb

*Board Recommendation: Elizabeth Rhodes. To nominate Kliebacker for Honorary membership in ACPTC. Will be sent to National Board.

*Publications: Jo Paoletti reported on national committee (one member from each region).
- Distributed questionnaire to get member's response.
- Running at deficit on publications -- at the current rate will use up reserve in 4 years.
- Overlapping functions of publications.
- Quality of publications.
- Recommendation by committee to establish a standing committee on publications to oversee all publications. To have one member from each region plus an additional member from each region that has 45% of members to be a policy making committee
- ER Board recommends that National establish this committee.

*Research possibilities: Billie McClaskey reported that ASTM standardization of Children's Clothing 0-18 agreement has been reached. Health-Tex and Carter's will make up garments to be pilot tested. Looking for Colleges/Universities to do measurements and wear tests.
*ATMI: Fran Duffield, liaison for the 1984 Textile Update announced that ATMI has agreed to sponsor again in 1985. Pick up a questionnaire, if interested and send directly to Jim Donovan.

*AHEA: Carol Warfield reported that the Clothing and Textile section of AHEA would like ACPTC to work with them on a pre or post workshop. Board approved for a 1 or 2 day workshop. Let Carol know your suggestions for topics.


*Reminder: June Mohler reminded us that in the morning is an opportunity for us to give ideas and recommendations for the future of ACPTC.

*Preview: Invitation to Rhode Island for ACPTC-ER 1985 meeting in Providence.

Adjourned 12:25 p.m.

Nadine Hackler
Secretary
ACPTC/EASTERN REGION
TREASURER'S REPORT
November 1, 1983 through October 31, 1984

OPENING BALANCE (11/1/83) $7,566.25

INCOME
National Dues rebate $1,447.00
Futures Meetings fees 971.50
Registration Annual Meeting 7,918.50
Refund 250.00
$10,587.00

Interest Income
General account 148.94
Publications account 590.96
$739.90

Total Income $11,326.90

DISBURSEMENTS
Board Meeting Travel 1,526.78
Committee Expenses 178.14
Futures Meeting Expenses 588.47
Annual Meeting Expenses 445.62
ACPTC 1982 Proceedings 877.79
Income Tax Withheld 39.68
Refunds Annual Meeting 577.50

Total Disbursements 4,233.98

CLOSING BALANCE 10/31/84 $14,659.17

Submitted by:

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Western Region
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Utah State University

Program/Local Arrangements
Tom C. Peterson
Utah State University

Registration
Louise P. Young
Utah State University

Hospitality
Doris Wright
Brigham Young University

Research/Innovative Teaching and
Position Paper Reports
Leslie Davis
Utah State University

Finances
Ruth Clayton
Utah State University

Proceedings
Renee Thackeray
Brigham Young University

Evaluation
Margaret Rucker
University of California
ACPTC WESTERN REGION CONFERENCE
October 18-20, 1984
Salt Lake City, Utah

THEME: FASHION YOUR FUTURE: A CALL TO ACTION

Wednesday, October 17

1:30 - 4:30 p.m. Tours of Beehive Clothing Mills and ZCMI Central Display have been arranged by Annette Fraser Bus boards from hotel lobby.

7.00 - 10:00 p.m. Executive Board Meeting

Thursday, October 18

8:00 - 10:15 a.m. Conference Registration

9:00 a.m. Continental Breakfast

10:15 a.m. Welcome

Tom C. Peterson, Conference Chairman

Opening Remarks
Charlene Lind, President, ACPTC-WR

10:30 - 12:00 p.m. Introduction - Tom C. Peterson

GUEST SPEAKER: Dr. Kate Kirkham
"The Process of Organization Change: Facilitating the Future"

Dr. Kirkham is an associate professor of Organizational Behavior at Brigham Young University. Dr. Kirkham's interests include individual and organizational change. Her consulting experience covers public, private, and government organizations.

REACTION PANEL - Sally Fancis, Charlene Lind, George Sproles, Barbara White

12:00 - 1:15 p.m. Conference Luncheon

REMARKS: ZCMI Corporation

1:30 - 2:30 p.m. Oral Research Presentation, Session One:

1:30 - 1:50 p.m. "Perceived Fashionability of a Garment as Inferred from the Age and Body Type of the Wearer"

Ruth Clayton*, Sharron Lennon, and Jane Larkin

1:50 - 2:10 p.m. "Effects of Masculine, Feminine, and Mixed Clothing Sets on Evaluations of Female Career Apparel"

Margaret Rucker*, Maria Hopkins, Daye McGee, and Albert Harrison

2:10 - 2:30 p.m. "Perceptions of Functional Clothing by Persons With Physical Disabilities"

Susan B. Kaiser*, Stacy B. Wingate, and Carla Freeman

2:30 - 3:30 p.m. POSITION PAPER

"The Medical Side of Fashion: The Future Role of Clothing and Textiles Researchers, Teachers and Cooperative Extension Specialists"

Kathryn L. Hatch*, Washington State University

*Individual making presentation.
4:00 - 4:50 p.m.  Poster Session One: Fashion/Merchandising Research

Julie Chatterton, Utah State University
Leslie L. Davis, Utah State University
Sally K. Francis, Oregon State University
Jane Larkin, Utah State University
Sharron J. Lennon, Indiana University
Nancy A. Morris, Montana State University
Nancy J. Morris, Colorado State University
Louise P. Young, Utah State University

5:00 - 5:50 p.m.  Poster Session Two: Textiles Research, Innovative Teaching

Merry Jo Dallas, Colorado State University
Janet J. Else, Colorado State University
Sally K. Francis, Oregon State University
Annette J. Fraser, Utah State University
and M. Jo Kallal, University of Delaware
Vera B. Keeble, Utah State University
Diane E. Lewis-Goldstein, Cal State, LA
LaVonne Matern, New Mexico State University
Patricia A Wilson, Colorado State University

4:00 - 6:00 p.m.  Hors d'oeuvres, cocktail set-ups, and other beverages will be served during the poster sessions.

6:00 p.m.  Dinner on your own

The Mormon Tabernacle Choir rehearses on Temple Square every Thursday evening at 8:00 p.m. The public is invited to attend at no charge.

Friday, October 19

7:30 - 8:30 a.m.  Continental Breakfast

8:30 - 9:00 a.m.  Call to Order - Tom C. Peterson
REMARKS: Mr. Darrel Hume
Mr. Hume is the manager of Nordstrom, Salt Lake City

9:00 - 9:45 a.m.  Introduction - Annette J. Fraser

KEYNOTE ADDRESS: Mr. Ernest D. Mariani
"The Impact and Growth of Apparel Imports and How the Apparel Industry is Planning for the Future"
Mr. Mariani is currently Chairman of the Board and President of Pyke Manufacturing, the Vice-Chairman of the Utah State Board of Regents for Higher Education, and Chairman of the Board and Chief Executive Officer of the American Apparel Manufacturers Association. He also holds a doctoral degree in jurisprudence from the University of Utah.

9:45 - 10:30 p.m.  RESEARCH AND POSITION PAPER
Leslie L. Davis, presiding
POSITION PAPER
"Collaboration with Industry: A Case Study and Aspirations for the Future of Textiles and Clothing"
George A. Morgan*, Doris K. Hime, and Janet E. Else, Colorado State University

Coffee Break

Oral Research Presentation, Session Two

"Discipline and Teacher's Dress: Student Perception of a Teacher's Ability to Discipline Related to Teacher's Dress"
Dallas A. Creson and Jancy J. Owens*

"The Effect of Store Image on Consumer Perceptions of Designer and Private Label Clothing"
Dawna Folsom* and Leslie L. Davis

"Normative Influence on Career Women's Dress"
Nancy J. Rabolt* and Mary Frances Drake

Luncheon
The Lion House, historic home of Brigham Young
The group will depart from the hotel lobby promptly at 12:00 p.m.

Tour of historic Beehive House
Return to hotel

STRATEGIES FOR THE FUTURE
Ardis W. Koester, presiding

Introduction and background of ACPTC future concerns
Marilyn Horn

Summary from subregional meetings and development of National Opportunities and Priorities list
Ardis Koester

Correct procedures for small group meetings and movement to groups
Ardis Koester

Small Group Strategy Sessions
Participation in three of the following:

1. National/International Scope of the Field
   Merry Jo Dallas, Leader

2. High Technology - Charlene Lind, Leader

3. Visibility as a Professional Field - Ardis Koester, Leader

4. Leadership Development - Marcia Morgado, Leader

5. Program Development - Kathy Hatch, Leader

6. Research - Susan Kaiser, Leader

7. Service - Jan Else, Leader
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<th>Time</th>
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<tr>
<td>4:10 - 4:40 p.m.</td>
<td>First group session</td>
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<td>4:40 - 4:50 p.m.</td>
<td>Move to next session</td>
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<td>4:50 - 5:20 p.m.</td>
<td>Second group session</td>
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<td>5:20 - 5:30 p.m.</td>
<td>Move to next session</td>
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<tr>
<td>5:30 - 6:00 p.m.</td>
<td>Third group session</td>
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<td>6:00 p.m.</td>
<td>Dinner on your own</td>
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**Saturday, October 20**

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<th>Time</th>
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<tr>
<td>8:00 - 9:00 a.m.</td>
<td>Continental Breakfast</td>
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<td>9:00 - 10:15 a.m.</td>
<td>ACPTC-WR Business Meeting</td>
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<td>Charlene Lind, President</td>
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<td>10:30 - 11:40 a.m.</td>
<td>STRATEGIES FOR THE FUTURE (continued)</td>
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<td>11:40 - 12:30 p.m.</td>
<td>Group leaders report from the Small Group Strategy Sessions</td>
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<td>12:30 p.m.</td>
<td>Conference Concludes</td>
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<td>1:30 - 3:00 p.m.</td>
<td>Executive Board Meeting</td>
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I'm delighted to be here. I won't make any comments about the snow since that's been covered. I will say that I did get my skis fixed early this year, but I did not intend to use them to get here today.

As we mentioned, a lot of the areas I've done work in organizationally have an underlying theme of change or managing change because it's impossible to deal with race/gender issues or to deal with team development, management development, without dealing with change. I want to spend some time today talking about change and several aspects of change, and then, as indicated, leave time for dialogue on this and hear reactions of others present.

I'm basically going to talk about four things: 1) What really changes, what is the nature of change? 2) What is planned change, and does it really work? 3) If planned change doesn't work, what does work? and 4) An application of my own learning about change and organizational dynamics. I tend to talk too fast and be informal. I hope you're comfortable with that.

When I was asked to speak today, I decided to go back and look at some early journals. I pulled out some descriptions and I want to read you some of these and see if you can guess the year they were written. For example, here's an advertisement appearing in Fortune. It says:

Good luck comes to those who earn it. 'The man' who is best equipped to meet an emergency is the master of the situation. The ( ) is proving its real worth today. Its speedy duplication of all kinds of forms, sheets, letters, announcements, bulletins, etc. is proving its worth. Cost reduction tools are a paramount need right now.

What do you think they were advertising? A mimeograph machine. It seemed as if the ad could be about IBM's new Peanut, but it was a mimeograph machine and the ad was raving about capability to reproduce and distribute information. Here's another one:

Like any other fine piece of equipment, the ( ) must receive expert attention and care to do its best work. Regardless of the amount of use, it must be inspected regularly. Every moving part must receive expert care. No one can care for ( ) like its maker, that's why the Otis Elevator Company has a maintenance service for you and your organization. A skillful mechanic is situated within reach of every building with an elevator.

Nowadays, of course, that's probably not true. That was the late forties. But here again, isn't the wording interesting? That could be a Xerox ad except the product has changed. There's a classic one which I wish I had blown up so that we all could look at it. Here's a gentleman
who has an engineering railroad cap on and a cigarette right in the center of his mouth, and overalls. It says underneath his picture, "Learning about the revolution." This is a 1940s comment, "After years of railroading, engineer Ernest Harry is required to learn a new task: how to operate a diesel engine. And so are thousands of other engineers. In 1937 there were only 50 diesel locomotives, today there are over 10,000." In 1984 we talk about relearning. We talk about the need to re-skill as if it were a new phenomenon, as if organizations are asking people to relearn for the first time in history, and yet this reference was not that long ago. I was alive in the fifties. This is within the context of my generation—others struggling with relearning and learning. So, there's a fundamental question here about what really changes.

I think we're going to have to be better observers and better historians to know what really is changing. I think it's easy to get caught up in a rhetoric of change and think we're changing. But then we may not be changing. We may just be substituting one product for another and not really changing things at all. I want to read you a quote from Peter Drucker. In the field of organizational behavior and management, Peter Drucker has challenged business schools. This is a sixties text about business schools, which were a fairly new entity in academic education.

Viewed as professional schools, business education has changed greatly. The concepts and direction of business education have changed little, far less than business and the business system. Where we had bookkeeping 50 years ago, we now have accounting, and tomorrow we'll probably have information management (which has proved to be true). But the concept of business education as a bundle of skills is still the rule no matter how we talk about models and process. All together the business schools in America have tended to react rather than act; they have codified rather than initiated. The new concepts, ideas, and tools of business have originated largely outside the business school and preferably without the benefit of academicians.

That's a pretty strong comment on change.

Much of modern organization was developed by practitioners. A coal company president, Henry Fayol in 1912 introduced fourteen basic principles of management which many people still quote. Alfred Sloan at General Motors and others were people who influenced management, who came not from the academic community, but from the business school. Then Peter Drucker continued with this summary: "The changes (in business education) have concerned manners rather than substance, techniques rather than goals, tactics rather than strategy, and views rather than a core philosophy." So once again I caution, as we approach the topic of change: what is the nature of change we want? Is energy spent on changing a tactic rather than asking "Is this the core direction for the change we want?"

One additional aspect. There's a gentleman at Harvard named Chris Argyris who has written a lot about change, especially personal development and change. He says part of the reason we don't keep track of the substance of change is that everybody has two sets of theories. One set is called an espoused theory and the other set is called a theory in action. Talk to people about change and they'll give you their espoused theory, which often is, "(There) ought to be major change, ought to be able to change the way we think about things, ought to be intense, etc." Then talk
about what they do, "Uh, that's too much change too fast, let's just go slow here." So we have one espoused set of theories and one in use. He began to research this with managers and found the effect in role-play situations. If I had invited three or four of you to come up here and role play a discussion about the future of your organization, those of you watching could say, "Oh, they shouldn't be talking about that, they should be doing this." But when you got up here, you'd probably be doing the same thing they were doing. Because when you get in the situation your theories of use take over and are stronger and more influencing on our behavior than our espoused theory. So, when we struggle with the real nature of change, we're up against something that is complex and universal, not unique to your organization. Be a good observer, and a good historian, and invest in making appropriate substantive changes rather than just change in "products" or tactics.

Let's talk about planned change for a minute. This is a term that became popular as organizational development got underway and it meant some sort of rational approach to planned change--still does for a lot of people. Gordon Lipitt defined planned change as an intended, designed, purposeful attempt by individuals or groups to influence the direction of their status quo. Taking what was a given in the organization and influencing it some way, giving it some direction, providing a purposeful realignment. Now, when he talked about organizational planned change he made a distinction which I think you also have experienced both in your universities or colleges and in your organization. Intended, designed or purposeful attempts to change are sometimes initiated by unintended things. So he said there's change that will continually impact the organization; there is also change that we intend.

Change that comes about from outside the organization can either be reacted to in a homostatic fashion, meaning as soon as it happens people start to repair what has happened and try to get back to normal or as a stimulus for looking at the future and making a substantive change. Here's the same theme that's showing up in different people in different years--if something happens, do you take hold of it and create what you like out of it (planned), or do you just sort of try to repair what happened and get back to the way things were always done? As you struggle with your own organizational future and direction, there's a tendency for someone to say, "Well, the way we've always done things has really worked." The challenge is to say, "That may be true, but let's now consider what we possibly can do before we move too quickly back to the way we've always done things.

Now, some common elements of planned change. Every planned change--now Gordon did a lot of research on change in organizations--has these common elements. First of all, somebody has to be an advocate for the change. This will prove critical. Somebody has to be an advocate. Ask yourselves, does change happen because people sit around and just ask what to do? No. Change happens because someone says, "What about this? This would be a really good possibility. What about doing this?" Or they are stronger and say, "I want you to do this," or still stronger they say, "If you don't do this. . ." These are degrees of advocacy. Advocacy--advocating for change is an important part of planned change.

The second element, which sometimes we forget particularly in this day and age, is time. It takes time to think through a direction of change for an organization. I don't know how many of you have looked at Megatrends--Naisbitt's book Megatrends . . . good. In there he talks about, I think the term is "technoflex." We're getting a conditioned expectation like a technology reflex: press this button, that should happen; go to the arcade
and win; get the person to do this. I have heard about some psychological studies that show that youngsters are developing immediate response demand criteria because of the technology. Press the button, something happens. Press "person," nothing happens, you know. So there can be an expectation that one can do things quickly because one has a quick technology. That's not true. Planned change or change that is going to affect the lives and meaning people give to their organization takes time. Now, there will always be a balance issue. It shouldn't take 12 or 15 years maybe, but it will take time because—remember what I just said about espoused theories and theories in use—people have to take a new thing and put it into their use, not just into their espoused theory. You need to think about something before you can do it. Change takes time because people have to go from thinking into doing, into actual behavior or ability to perform.

Advocacy and time are important elements of change, and thirdly, more collaboration and cooperation is required than in the past. Why? Because we're political entities. Organizations are more political in the best sense of the word, meaning that we're trying to exchange ideas and influence. Therefore, collaboration and cooperation become increasingly important and so does power. I will say some things about power a little later which have proven interesting and useful.

The fourth element is a systems approach. I think if I've seen organizations fail over any reason, it's the failure to think about their interconnecting relationships with other groups as they anticipate change. We have seen groups pull together and say, "This is what we want," and not even pay attention to the fact that they're related to two or three other bodies. If they change, they're going to have to change their relationship with those other groups. It really does make a difference. I worked a lot for the Girls Scouts of the USA. When girl scouting makes fundamental changes, they have to consider other community organizations that are involved with girl scouting, not just one isolated Girl Scout council. When girl scouting takes a position on a women's rights issue, this is a major concern for many community centers. So you have to consider all the ramifications. In our department, in Organizational Behavior, if we hire a new staff person, that is not an isolated situation, as many of you know.

And lastly, consider the emotional, as well as the rational aspects of change. The rational aspects of change often get well documented. The emotional aspect of change is often what provides the direction. I want to talk for a minute about why planned change has sometimes not worked even though it has served well as an idea and helped guide our thinking. There was an interesting article quite a while ago, in Harvard Business Review on the "Myth of Innovation." The critique was that in the past several years organizations have put a lot of money into hiring strategic planners, or long-range thinkers. This author set out to have Peters, who later wrote the best-selling In Search of Excellence, find out how true it was, that planning, the formal planning process, really produced the best ideas and organization. Guess what he found out? He quotes Bryant Quinn, a remarkable gentleman who studies strategic change in organizations: "After 25 years of study of IBM, Xerox, etc., not a single major product came from a formal product planning process." Repeating: Not a single major product has come from a formal product planning process. That's interesting, isn't it? Peters goes on to say in the article, "I went around just flagrantly using this quote to see if someone would take me on. To see if someone would say, 'No, I know a major product that came out of a formal planning process...,'" no one would take him on. In fact, people got nervous and embarrassed and kind of said, "Well, maybe at Bell Labs they did."
Peters goes on to say this experience shouldn't indict totally the formal planning process, what it should do though, is allow in our organizations the sloppy side of change. That's his phrase, sloppy side of change. Let me read you his explanation. "Persistence, lots of tries and effort, perverse and unusual users, five-person skunk works" (which is the organizational term for some odd group over there doing we-don't-know-what-yet), "sequestered in dingy warehouses, plans gone awry, inventions from the 'wrong' industry at the 'wrong' time for the 'wrong' reason," and "respect for complex ideas produced on the back of envelopes." These are the things that produced change and influenced organizations. Innovation, it seems, from pure science to industrial organization doesn't occur the way it's supposed to. He continues:

We roll out the Manhattan project which was a big orchestrated change effort, time and time again to illustrate that concerted, well-planned effort is the only side that wins. Wrong. It turns out to be an anomaly. My objective is to give credence to the sloppy side of innovation. We must organize and manage to allow the sloppy process maximum play.

The sloppy process means maximum play, meaning maximum access, maximum exposure. If you're wondering how to do that organizationally, I've worked with a couple of organizations and one thing they do is in their membership meetings they have caucuses. They'll have time, rooms and times, places for people to caucus. Why? Because the sloppy side of change is people have to get together and sort of talk about things and they don't expect everything to surface rationally on the agenda at the membership meeting. So they build into the process a "sloppy side," time to caucus, time to chat with each other. If fact one time I was in a meeting of members of a professional organization where the members participated in a general analysis; all of the 'grandparents' of the organization in one corner, and all the middle children in the center area, and the "new kids on the block" in another corner. Each group talked about how they saw the organization; it was fascinating. That's pretty "sloppy." Some people got wrapped up in being a grandparent; ... some people refused to be grandparents. The process produced an incredibly enlightening look at the organization that could not have been produced from any rational planning process. At times an organization must give thought to this: How do we get that rich information out in addition to the formal papers or memo?

Now, this critique of planned change is also evidenced on a turn-about in business organizations. The strategic planning staffs have been reduced in many organizations. The emphasis now is to have individuals who are directly responsible (that would be line managers, and in your case that might be members of an organization), more involved in the change process. The advice now is to quit having executive committees that are isolated trying to plan the organization's direction. Get people who are in the organization (or who are the organization) involved in the process. So business is moving back to having line managers become not strategic planners but strategic thinkers, people who are thinking about change. In fact, one article I read in research for this presentation today said, "The discouraging thing is a lot of leaders of organizations spend less than 10 percent of their time thinking about the direction of the organization" Less than 10 percent of their time thinking! What are they doing, reacting, responding, trying to get their own work done? But, thinking
strategically about the organization less than 10 percent of the time. So, a lot of the energy now, in terms of planned change is centered on figuring out how to think more critically about the organization, not let's figure out the most rational process by which we can try and do something.

Strategy then becomes not the rational process, but the ability to think critically about how you fit in as an organization and what it is you want to contribute. A lot of Drucker's work has to do with the fact that as knowledge workers--people that have a lot of knowledge and skills--figuring out what we want to contribute is most important. What can we contribute--because that will provide the energy and direction for the organization. Now I think, from what I know about your association, that would be a critical question for you. What do you contribute to the lives of your members? What might you contribute? Not 10 years from now what exactly we should be. But what do we want to think about? What are the issues? What should we contribute to the lives of people we're asking to be a part of the organization? That is the more critical aspect rather than total rational planning. This whole issue about changing from the well-formulated strategic planning to the more "sloppy side" also has a lot to do with the kind of leadership available to the organization.

Monsanto Corporation has started a task force of mind managers called the "What-if Task Force." What they do is they meet periodically and say, "What if this happened, what if that happened, what if this happened?" They try to anticipate things that might be affecting Monsanto. They found that by having a "what if" strategy, the company became more aware of its environment and changes going on outside. When they were doing planned rational change, guess what they were more aware of? Right, inside happenings. So what they're trying to do is get people thinking about their environment and ways to enable them to take in information and put it into "theories in use," to be more strategic thinkers rather than just strategic planners.

A lot depends on leadership. There's pretty well documented research to show that some leaders (and some of us individuals) see change as a threat and therefore, employ all our best psychological defenses to deny, distort, discount, reduce the fear of change. Other people need change and see it as a growth opportunity. If I had a way of predicting which of us in this room saw change as a threat and which saw it as growth opportunity, I'd be making more money. I mean, a lot of it is personality, a lot of it is situational context, a lot of it's our own reaction to stress. I think what is important is as you listen to each other talk over the next several days, begin to rehearse each other in talking about the rich potential side of change. This side prompts such questions as: "Well, what opportunity does that create for us to do? What should we be attending to if that's the case?" Rather than, "Does this mean we won't be an organization? Does that mean we lose . . . ?" You know, all the stuff we are concerned about, the threat side.

An example of how real this is is: when I was working with girl scouting, councils trying to increase the diversity of membership in girl scouting and to make sure that girl scouting was girl scouting, not white Anglo-Saxon girl scouting. Invariably the response was, "Well, if we open our membership up to women and girls from all communities, we'll lose some members." Here is this vast population out there that could be incorporated into girl scouting (some had given hints that they like girl scouting), and yet we had resistance from some staff and volunteer leaders saying, "We'll lose." It was harder to change the frame of mind of the leadership than it was to prove the actual membership availability.
potential. There was a rich potential but we ran into people not seeing it as such. So it is extremely important to look at your own leadership efforts for what you've contributed as a member to see if you're looking at that rich potential side.

Mike McCoskey, who was an instructor at Harvard when I heard him speak a couple of years ago, has written a book called The Executive Challenge. In that book he said the primary challenge for all leaders right now is to manage ambiguity. Managing ambiguity. Why? Because if you're going to have the sloppy side of change, which is what we're talking about, you're going to say, "The rational planning process doesn't always work." Guess what you're going to walk right into? Ambiguity. It's amazing to me, even now, the number of managers I run into that feel like they have to have an answer for everything. If they don't know, they're incompetent. So they're very creative sometimes in making up responses rather than managing the ambiguity.

It's curious, but this summer I worked for three months at a large engineering organization interviewing managers on management development. The managers that impressed me most were the managers that looked right at me and said, "I don't know. I don't know yet." I mean, that was so powerful because what that meant was, "I'm going to find out," or "I'll be looking for something," or "We don't know yet what the new technology is past what we can now build." The other managers said, "Well, you see, Kate, here is what we have planned." And they'd be off on this track, and I watched the faces of their staff going hum, hum, hum, hum, and you knew this was something that was not well integrated with staff.

I would hope that the ambiguous nature of change, because of the sloppy side of planning, doesn't become a threat to the competency to participate in it; that we maintain the sense that the competency we need now is to be able to say, "Out of the ambiguous environment we're in; or out of this ambiguous sense of how we'll be connected, what we'll be teaching, or what we'll be doing, will come something that will be worthwhile." So I'm not saying give up the notion that you can influence a direct change. I'm saying move away from expecting only rational, planned change and allow the dynamic nature of it be a resource. If we do that we have to be more comfortable with ambiguity.

A few more things about ambiguity and fear and psychological defenses. There's an article called the "Abilene Paradox." Has anyone here read it? The "Abilene Paradox?" O.K., if I don't tell the story right, you can help me. Professor Jerry Harvey at George Washington University, talked about a family trip with his wife and father- and mother-in-law. They were seated in Coleman, Texas, which is a very hot, tiny town in Texas. The father-in-law said, "Jerry, since you're here maybe we should all get in the car and drive over to Abilene and eat in the cafeteria." Jerry looked around the room and said to himself, "My father-in-law wants me to leave the lemonade that's here, the dominoes that we're right in the middle of, this cool fan, and drive to Abilene to eat in a cafeteria?" Further, "I guess Dad wouldn't have brought it up unless he really wanted to do it." So, publicly he said, "I'll go if you go." So he turned to the mother-in-law and said, "Do you want to go to Abilene?" She said, "Well if both of you want to go." Of course, the daughter said, "Well, if everyone here's going to go, I guess I'd better go." So the entire family got up and left their comfortable situation, drove in a dust storm and the heat to Abilene, ate this awful meal and came back. It was the father who said, "Why in the world did we go to Abilene?"
Out of this rather spontaneous insight to organizational behavior Jerry developed a rather profound theory: "Organizations often take action contrary to the desires of their members." Why? Because they fail to communicate their underlying agreement on issues. Most of us, when we think about planned change, we think about intense conflict or intense difference. Here's a group that had underlying agreement--it is stupid to leave home and go to Abilene--and yet took action contrary to that underlying agreement. Why? Because they thought they were helping and they thought that they were pleasing and they thought, well, since the father suggested it... As it turned out, the father said, "I only did that because I felt I was supposed to be doing something to help your trip be better." I have seen the Abilene Paradox operating: organization members, because they don't know how to explore their agreement end up mismanaging it! And producing all the symptoms and conflict. So as you pursue the direction of your organization in discussion, avoid Abilene, avoid agreeing because you think someone thinks you should, because you think someone else in a key position thinks thus and so. Instead talk through and try to understand what you really want to do, what you want to contribute and manage conflict as it occurs.

By the way, Jerry said there were sometimes real risks. If you confront what seems to be agreement maybe someone really does disagree! I believe it often is far better to run the risk of confronting, than a whole organization going in the wrong direction, or going in an assumed direction. Because if you care and work together, risks from confronting can often be repaired. Be careful about Abilene because all of us have ways of helping each other get there.

Gene Dalton, who happens to be my department manager in the Organizational Behavior Department, several years ago began to research effective change. If planned change isn't as romantic as we thought it was, it isn't as powerful as we thought it was--what really makes for good change efforts in organizations? How do you know what contributes to successful change efforts? His research produced several points that I think are critical and have proven essential in understanding change.

Change in organizations goes through a sequential process of unfreezing, ambiguity, and refreezing. This is part of Kurt Lewin's change model which says something, or an event, captures people's attention, and gets people thinking about issues (felt need). That is the unfreezing part. Then, there is the chaotic middle and then things will solidify again and will be integrated back into the organization (or institutionalized). If a change effort is not successful it is often because it was not institutionalized to become the new normal way of doing things.

Next, Gene Dalton asked, "If that's the case, if moving back into that more solidified state is so critical, how do you go about doing that?" He found four things that you can bank on which are going to affect planned change or any change process. The first is: Change efforts should move from a general goal to a more specific objective. For example, if you started out saying, "Let's rethink the direction of the association," and two years from now you're still saying, "Let's think about the general direction of the association," you would know that change wasn't happening. Why? Because there aren't more specific sub-goals. There have been some experiments on this aspect. Some department managers were told, "We want you to establish a better budget process." To a second group of department managers, they said about the same thing, but added, "Here's some specific sub-goals." And sure enough, the group that got some assistance in making
more specific sub-goals began to take on those sub-goals and put them right into their behavior. The group that didn't get that attention, several months later was still saying, "How do we go about getting a better budget process?" They were still at the general level because they hadn't started to move to specific changes. I can tell you from my work in race and gender dynamics, if an organization says to me, "We're an equal opportunity employer." I say, "What do you do that accomplishes that?" And they say, "We're an equal opportunity employer." I can tell you they're probably not because they haven't moved it into any specific objectives within their organization. Whereas an organization that is an equal opportunity employer can usually say, "This is our process for reviewing our goals and objectives, this is how we want things, this is who has the responsibility, this is how we look at it." The goal is worked right into the organization processes. Effective change will move from a generalized goal to a a very specific objective. If it's working, whether its sloppy or planned, it'll move somehow. If it's a sloppy side, it'll move very politically, if it's a planned side, it'll move through some more formal agenda.

Secondly, and this is sometimes a hard one, if you want change to take hold in your organization, you have to provide a way for people to form new relationships around that proposed change--new relationships. So for example, in business, when we try to get people to move from traditional factory lines into what we call social/technical work organizations, it isn't enough just to understand and write specific objectives or understand the goal. What does it really mean in terms of your day-to-day interaction with somebody? Who will you talk to? Who will be your friends now? Who'll you be working with? Right now I'm on the board of directors of the Organizational Behavior Teaching Society, each year we bring on three new members. It's really interesting. Those members have to come in, be absorbed, understand the board, figure out who their allies are, who their buddies are, and that's a legitimate process. People have to have a chance to form new relationships. Within your own institutions, if you want to change the profile of your department you have to form new linkages with people in the system. Right now at BYU, in the MBA program, as was mentioned, I'm the new Associate Director. One of the things the Director and I wanted to do is, over time, enable people to see that those of us in business schools are not all "fast trackers". So, what are we doing? We're not just sending out memos saying, "Hello, this is our emphasis." We're trying to actually ask ourselves: Who do we need to see on campus? Who needs to understand us? With whom do we need to build good relationships? It's an engaging process. Because what we're saying is somebody needs to know us in a different way than they now know us. New relationships have to form. On your campuses it may be a president, other people in your faculty, somebody needs to have a different relationship or quality of relationship for change to succeed.

The third area of successful change is self-esteem. People have to move from doubt to heightened self-esteem. Some people call this the learning curve. It's the process of saying, "I don't know that we can do this," followed by, "Oh, I see how I can fit, I see what you want me to do." So it's a process of moving toward heightened self-esteem, feeling capable, feeling that one can contribute. That can come internally; sometimes, it can come externally by leaders saying, "You're the person, we need you to do this, we want your help on this." There's a classic study in organizational behavior, the Hawthorne study, which some of you may know about. They went into a company to look at the performance of a group.
They were going to study changes in time, lighting, etc. They found out, no matter what change they made, the groups' performance improved. No matter what change they made. It was so dark in the room at times, it was like moonlight and this group was working away. They stopped the whole experiment to ask why it was happening? The response was because researchers were noticed. Researchers were taking notes and implying it was possible. It became evident that people care about being involved, and it can give confidence to heighten self-esteem. Hence, people feel better about the change and feel they can contribute to it.

The last area of successful change picks up a theme we've already mentioned, which is internalization. People have to move from external motive to internal motive for change. They have to move from, "Oh, this is what the leadership wants," to "Oh, this is what I agree will work in my organization." That sometimes, is also a hard part of managing change because when members or employees begin to take over change they tend to want to make it their own. Sometimes it's really hard for a leader or manager to see somebody else start something and not do it quite the way they had rationally planned it. I know, I watched myself go through this process last year when we were rewriting some mission statements and directions for our department. As the faculty got more and more involved in the discussion, pretty soon it wasn't just what I had anticipated would happen, but everybody's contribution, and I began to very very nervous because I wanted this sentence in, and that document that way, and it got to be funny after a while. I had to say, "Kate, you're doing what you tell people about, which is, you're not letting go of controlling the process so that other people can internalize the issues. Usually, what comes out of the interactions is a richer product anyway. But there has to be a time when people take hold and internalize change efforts.

Now, if you're not moving on those four dimensions, if you're not moving towards specific objectives, toward different and hopefully better relationships, toward heightened self-esteem, and toward internalization, you can bet the change process, however initiated, sloppy or planned, is not going to really hold together. So those four have proven to be the most successful ingredients of planned change or change efforts.

O.K., now, if that's the case, let me make a few comments about power. Because the cornerstone of looking at the change is that people try to influence each other to change. It's an influence process. Change is an influence process. It's not a rational process, as we have already pointed out; it's an influence process. Therefore, with an influence process, we have to know and understand a lot about power and influence. In the organizational behavior field, in the last several years, a lot of research has focused on power. Whereas, ten years ago one would have thought "power" was a nasty word. Now, we are more aware that we need to know about power; power is a pretty fundamental ingredient to effective behavior in organizations. Jerry Pfeiffer looked at power and came up with, I think, an astute observation about power: power accrues to people who solve problems for an organization--critical problems for an organization.

Now, the reason I think that observation is important is because if you want to change an organization, and you want to influence people who have power, you need to figure out, "What are the critical problems?" That's a different orientation than focusing on what are the goals and purposes. They may match; maybe goals, purposes, and critical problems match up.

If you look at organizations in the past several years, one of the groups that has gotten a lot of power inside organizations are corporate
lawyers. Why? Because suits are a critical problem right now. There are a lot more lawsuits going on. Who's going to get priority influence? People who can contribute to that critical problem. Before that E.E.O. people had a lot of power, which has now diminished. Why? Because some people think E.E.O. is less than a critical problem. If your organization were in financial trouble, who would be a critical influencing group?

So, figure out what the critical problems are for the people that either want to be members of your organization, or you want to influence. In your own organization, for example, maybe a critical problem is career direction. I'm guessing. Would that fit? What will your position be? If that's a critical problem for a group of members, and you pull together a task force around that, your power and influence would greatly increase with that group, right? Why? Because you're dealing with what is viewed as a critical problem right now. It's a way of thinking about change that, in addition to organization's mission or purpose is a political way of thinking about things. Jerry Pfeiffer said there are two other important dimensions of power. One is scarcity, and one is uncertainty. Scarc resources and uncertain conditions contribute to critical problems. If every organization association is producing something and you say, "We're going to do just the same thing," people will say, "Why should I join this organization?"

For the Organization Behavior Teaching Society that I mentioned, we have maintained a focus on teaching of organizational behavior. Whereas the Academy of Management has focused more on publication and presentation of research. We literally allow very few presentations in our summer conference that don't relate to teaching. Why? Because we view that as getting scarce attention right now, it's a critical problem, and we can provide resources. So, as you think about change, pay attention to the political and power issues involved. They will be a part of defining what the critical problems are that the organization faces. This takes us back to the issue of leadership.

I want to tell you a little about new research by Warren Bennis. He has just finished five years of interviewing key leaders in business organizations and volunteer organizations. He found out that there are four things that leaders had in common in organizations. Number one, they decide what people should pay attention to in organizations. He called it a compelling vision. They create the belief that people can see where the organization is headed. He says it's not merely a technique of management saying, "Well, our agenda for this week is . . ." It's not that. It's the compelling vision, it's, "This organization could be doing this." You cannot push people toward change. Well, you can, but you'll get a lot of resistance. However, it's the capability of creating a vision of where we want to go that's compelling. He found that characteristic common to all leaders who were effective in his study.

The second one was very similar to the first one: leaders provide meaning. Now, let me add here a parenthetical thought from Naisbitt, in Megatrends. "We are drowning in information, starved for knowledge." This just struck me so powerfully because I looked at my own desk, and thought, here we have evidence of a person drowning in information and starved for knowledge. I get more information than I know what to do with. What do I look for? I look for organizations and groups and people that give meaning and help me structure the meaning of information. You'll notice there's more and more attention being given to clearinghouses—people that have on-line information management now or people that say, "We'll consolidate this for you, give you summaries." In the management field, there are groups
now who are publishing a synopsis of all major articles in an annotated form and sending that out to executives. Why? Because there's just so much out there, that somebody has to be shaping it. So leaders who can do that and help people see what we should be making meaningful in our lives are very much needed.

The third one is trust. He found a common ingredient to successful leaders was trust. This is not the trust of telling someone your inner secrets and trusting they won't tell someone else. It's the trust of predictable, competent performance. That kind of trust, where if someone says, "We're going to do this." You know they're going to do it. They're not going to say in five months, "Oh, right, we didn't get a chance to follow up on that as we had hoped," or, "You know, something else came up as we got back to our campus." That doesn't prompt a sense of leadership. We want to have a sense that there's a predictable follow through and integrity to what someone says they'll do. The phrase that Bennis used is "part of a whole." He talks a lot about Margaret Thatcher and her leadership style, wherever she goes, people see her as a whole. They don't see one side of Margaret here, one side of Margaret there. There's a predictability in the way she responds to situations. It's extremely critical because you can't really have people attending to things that help you have meaning if they don't have a trust in who you are or what you're about. This summer, the most discouraging stories I heard were (again, interviewing about management development) from subordinates who said, "Gee, my manager will give me an assignment. I go into a meeting, and if someone criticizes it, he acts like he didn't give me that assignment. That is very demoralizing."

The last dimension common to leaders was knowledge of one's self. I think this is particularly intriguing because Bennis talks about effective leaders who know their strengths and their weaknesses. They do not try and be someone they're not; they don't say, "Well, I should be as quick as so and so," or "I should be as powerful as thus and who" They ask themselves about their strengths and weaknesses. If my strength is verbal skill, do I use it well? If my strength is analytically thinking things through, do I work with someone that speaks well? What are my strengths and weaknesses?

Now, the reason these four things are important is, that I think we're about to have major redirection in change. We have had incremental change, like replacing the Xerox for the mimeograph, replacing of something, the Concorde for the Wright Brothers' plane. We were replacing incrementally a type of machine. I think now we're getting to the point where we're going to have unknown and unpredictable change, change that we can't quite yet comprehend. One person who has done a lot of work on this is sociologist Charles Perrow. He did a study of the nuclear plant breakdowns like Three Mile Island. What he found that I think is most frightening is, part of the reason accidents happen is because in the past when we were dealing with systems, the people working with the systems could comprehend the change that would take place within that system. In other words, if a typewriter breaks down we could comprehend the parts of the typewriter. In a nuclear plant, it is so complex that it's like n + 1 dimension of change. If this happens, and this happens, and this happens, we do not know if this, that, or something else will happen. We don't know, we can't comprehend it, we don't know what combination of things, we don't know enough about the technology and materials yet to know. That's a different dimension of change. We will need to be able to influence and change paradigmatically, changing the whole way we think about something.
This summer I got involved in technology. I started reading about changes in technology, for example the change from tube to solid state electronics. Some of those changes came because at Bell Labs there was one manager who said, "Don't tell me how to improve the tube, tell me what else might be possible." That creates interesting options!

Now, just a couple of comments on my own learning about change because part of the topic title today was, "What might we do to facilitate change?" I would like to comment on a few of those things. The first thing I think we can do to facilitate change is to reexamine our own core assumptions about change, our own core assumptions. A long time ago, Doublas McGregor published a book about Theory X and Theory Y management, which probably many of you have heard about. It was a simple statement of assumptions. For example, here are Theory X assumptions: "People need directing of their efforts, one has to constantly be motivating them, controlling them, modifying their behavior." Theory Y was based on beliefs that people are not by nature passive or resistant. The motivation and potential for development and the capacity for responsibility are in the person. See the difference in those two assumptions? The one is: People won't do anything until you ask them because they are basically lazy and don't know what they want to do anyway. The second is: People have great resources and we need to know how to tap into it. Those have been around since the late fifties and early sixties and yet I still find managers who believe that first set. If you don't tell somebody to do something, they won't do it. I hear: "People don't change, no they don't change, Kate." All around this manager are people changing their daily lives, learning new skills. So I think, fundamentally, you have to ask yourselves what do you believe about change; what are your core assumptions? Do you believe that members of your organization can contribute to its future? If you do, how? What do you believe they can contribute? Or do you believe that we ought to wait and see what happens and maybe it's not "right" now, it's not the time to do something? Or do you move toward the side of feeling threatened by change? Gene Dalton's definition of an organizational change is the individual behaviors of members moving in concert. Organization is not some remote abstract thing. The association you belong to is the collective energy that you put into it as members. So if you don't know your own core assumptions, you can't expect some magic to pop out of your organization as a whole because it's really going to be an extension of your individual capacities.

The second thing I think is really important is once you know your core assumptions, you have to figure out ways of getting people involved that are appropriate to the types of involvement we want. We want better managed participation. I am so tired of being called into meetings that I do not need to be in--as if somebody said, "Well, if we get everybody in the room they'll feel involved."

You need to figure out the appropriate ways of involving people. We have, right now, more technology for communication than we can use; we have technology for electronic mail; we have technology for teleconferencing; we have lots of technology. What we need to do is figure out when is an appropriate time to use what technology. There'll be some meetings that you'll not want to get your executive group together, but want to do it by telephone or by television. The other times, when you say, "No, we want everybody there because we want to spend some time pondering the meaning for us. We don't always get meaning the electronic way. No, we want facial expressions, we want animation, we want to look people in the eyes and understand where our organization's going. So I think we need to do a
better job of calibrating involvement, of saying when and what kind of involvement we are looking for from our members. I know organizations that treat me with that sort of respect, like sending things that say, "This is for information background. Read at your perusal." "This is immediate, we want your response by a telephone conference call." This helps me structure that; leadership has given meaning. They help me identify the kind of participation that's really useful.

The third thing is we have to know more about the people we're working with. "High tech, high touch" is true. The more technology we're going to get, the more we need to stay in tune with the people and know the people we're working with and not get to the point where we feel like, "Well, if we add up everyone's top five priorities for goals, we'll have the direction for the organization." Some people have done that, not the organization, but some people who say, "Let's just get a quantitative summary prioritized and we'll have direction." We need to know what people want, we need to know the direction. Kotter did a study at Harvard on general managers and found that the best general managers know an industry in depth. You've seen the Remington ads, the guy walking around the plant, you see Lee Iacocca walking around the plant, what are they trying to depict? We know this industry! We care about the people who work here, we chat with the people. You and I may wonder if they really do, but they try to convey they know about and understand the people they're working with. Not just we want more members or we want to have a larger body, but we want to know and understand: What are the issues facing the people we are asking to be members?

And fourth, I think we need to improve our leadership skills. I think each of us ought to take a strong assessment of our personal expression skills because a lot of leadership is in the political and influential dimension. I think we ought to see if we're comfortable with ambiguity. I think we ought to be more comfortable with the political aspects of our organizational life and the real problem-solving politics. Not the backbiting, rumor-monger politics, but the sense that problem-solving is political.

Lastly, let me say something about values. I was saying to a friend of mine the other day, a woman who reads science fiction, my concern was that with all this emphasis on technology in our real lives, science fiction may begin to deal with people re-creating communities and involve more value exploration. She said she thought it was already beginning: a search for common standards of humanity.

We can say as an organization, here are standards that we value. There's something here that matters to us; we have a developmental commitment to our members. We have a developmental commitment, not a usury commitment, not a "give us what you want," but a developmental commitment. We as an organization are ready to help people change, to change ourselves, to preserve quality, to preserve what we are looking for in the organization. Now, I think that message, sent loudly, will enable more people to really participate in change in ways we've been talking about today. Thank you very much. I've enjoyed meeting with you.
Let me give you just a brief overview of the ZCMI history. Brigham Young spoke in an LDS conference of 1868 about some of the concerns of the merchants that had come in primarily with Johnson’s army, a group that had come into the valley about 12 years earlier. They were diehards who came in and set up shop, they were merchants, and they were extracting exorbitant prices. Calico was selling for $1.00 to $1.25 a yard. Flour was $10.00 a hundred pounds and there were a lot of feelings that these people were not operating in the best interests of the Mormon community. Residents had been driven from several states and settled out here hoping to be left alone and now they felt that threat again. So, with these merchants as they were, the way they were operating, Brigham Young said we need to form some other means of retailing and called together between 24 and 45 merchants in Salt Lake City. Their first meeting was held on October 15, 1868. He asked these men to start giving some thought to forming a cooperative. Over the ensuing months they met several times and formulated ideas and on March 1, 1869, the first doors opened for this new cooperative—Zion’s Cooperative Mercantile Institution. By definition of what a department store is, we feel that ZCMI became America’s first department store. Some stores are much older than ZCMI, but we feel we can lay claim to the title of America’s first department store.

At the time there was no single building. The first building was in the old Emporium which is now a Zion’s Bank building on the southwest corner of Main Street and First South. Later, the old Constitution Building was torn down for the new Crossroads Mall, just about where the Nordstrom’s facade is right now. There were several buildings and finally in about 1876, they consolidated into one building which is what you see at the ZCMI store now. That facade was dismantled when we tore the old building down in 1973. In 1972 and 1973 we started to tear down the old building and the facade was taken off and reconstructed in its present form. It has been recognized as a national historical piece and serves as the front of our flagship store.

From that point, ZCMI began to grow. They were in wholesaling, primarily in Utah and Idaho. They pulled out of Idaho around the turn of the century and did not return until a store was opened in Pocatello in 1981.

When the cooperative was conceived, it was envisioned that there would be a buyer for several lines of merchandise. They had everything for people, but if a person wanted to buy a box lid it was necessary to go to the buyer that had the responsibility for buying box lids. Likewise, if a saddle or clothing item was needed, then that respective buyer had to be visited.

Today we have nine stores in our chain, including two in Idaho. Our ninth store was just opened in Idaho Falls on August 1st of 1984. In greater Salt Lake City, we have three stores with the flagship store here in downtown Salt Lake City.

Projected developments are brought about by a lot of the technological changes that are coming, but perhaps more so with demographics, the movement of people, their demands, and what they are expecting from a
retailer. Specialty stores have been very prominent in the retailing field, I think most notably in the last 15-20 years, when they have made their greatest inroads. This, along with discount stores and manufacturers opening their own retail outlets, has greatly influenced department store retailing. Manufacturers are finding they can effectively move their own merchandise and eliminate the wholesaler and, at times, the retailer by opening their own discount outlets. These are changes that are making things happen to a community and people are expecting retailers such as ZCMI to respond to these respective needs.

I think we see at the store that some changes will need to be made. Some of it will be evolutionary and we just can't change some things. I think in many respects, we are going to have to be revolutionary in the way we approach certain things about our business. People we hire are going to be making those dramatic changes. The schooling you are giving them and the attitudes they possess will have a very dramatic effect on the way retailers will operate. We have to be cognizant of that fact.

I would call ZCMI a buyer driven organization and we have been from the outset. I was reading the NRMA Buyers Manual. In it you get the impression, if you read chapter after chapter, that without the buyer the retail organization would die. I think many buyers have this feeling. We have had buyers in our organization who feel, "If I weren't here, they just couldn't exist." This is a good point. We need people who are dedicated to their profession that strongly. But as more and more organizations take a hard look at what we are doing to meet customer needs, we can no longer be driven from the vantage point that everything must funnel through or be in concert with the buying office. Many organizations are making changes, very dramatic changes. Organizations which are seeing very substantial productivity gains and meeting needs of customers have literally discontinued being a buyer driven organization. They are driven by sales. Retailers have to ask themselves, "Is what I am doing going to serve the customer and is serving those needs fulfilling what the customer wants from this organization?"

I think far too often, we have buyers who just cannot trust a computer printout. Some of them are absolutely afraid of picking up a computer printout. They don't know how to read it. Younger buyers are familiar with them, but we have buyers who just absolutely refuse to be involved with them. I think we have to change that attitude or we will have to change buyers because we no longer can be driven by a buyer who says, "I just don't trust that report." So, he or she gets on the phone and calls each branch and demands a physical count. About ten days later, they want to make sure that they are open-to-buy, so they go to the phone and request another count. Invariably they call for the count at the busiest sales hours and take salespeople away from valuable sales time.

To provide a case in point, when we opened the Grand Teton store (Idaho Falls), store management thought our Pine Ridge store (Pocatello--45 miles away) would have to budget down for the last half of the year and they would be either flat in sales or minus in sales because of the competition. It didn't turn out that way. During a two-week storewide competition for sales increases (The President's Cup) everyone was thinking the Layton store would win again, but it didn't turn out that way. Pocatello went to work and posted anywhere from 17 to 18%, and in one day a 31%, increase in sales. They averaged 20% increases each day. One day, two divisions of our buyers (approximately 15-16 buyers) landed on the store. That day, the store dropped $21,000 in sales.
The question came up the other day, "How can we increase our growth margin?" I thought to myself, "Keep the buyers out of the store." If we keep our buyers out of the store for the next two and one-half months, maybe we could increase our growth margin substantially. I think that is the key.

May I just comment here a little bit on what we look for in people coming into the organization. We have intimidated every kid on the block for 115 years. We have been and are strong, but we have some new kind of competition—an outstanding organization, Nordstrom's. Weinstocks, Mervyns, and other discount retailers are also here. They are all very competitive. In order to meet the competition, we are going to have to have a new breed of people coming into the ranks who are going to be able to meet those kinds of challenges. We are going to have to be more conscious of being a sales driven organization than a buyer driven organization.

When we interview, we ask, "What do you want to do?" In most cases these are young people who are studying retailing or are coming out of clothing and textiles with some retailing classes. As a general rule they say, "I want to be a buyer. That's my big goal. I want to be a buyer." Then you start talking about pounding the streets for two weeks on a buying trip and going into each mart and each showroom day in and day out, and flopping out in a motel room that night and writing up orders and trying to get it to balance and going back and looking at something to buy and saying can I do this, can I see this? Start making those decisions and some of the glamour of the buying trip wears off.

So I ask them, "Do you have the energy to take that pressure? Can you endure pressure and the stress that comes, because there is a lot of stress." "What about your math skills? Can you figure turn-over? Do you know how to calculate open-to-buy? Can you go through those and make an effective job of them? What about your negotiating skills? Can you set across the table from that very sharp manufacturer and extract what you need in order to maintain your growth margin? Can you get those deliveries F.O.B? What about your own time management? Can you learn to prioritize? Can you prioritize your time and look at the essential things? Can you focus your attention on those things that need to be done? Sometimes there are hard decisions, are you prepared to make them?"

"Communication skills—are you prepared to deal with people and communicate your needs, not make demands? Can you communicate with co-workers, salespeople, resources? Can you learn to evaluate inventory? What classes have you taken where you learned some of the basic mechanics of that? What do you know about turnover—merchandise turnover? What does it mean to you? What about your skills on a computer? Can you read a printout? Can you read some of the jargon? Do you understand what a computer can do?"

"Do you know merchandise assortment planning—flow and distribution? These are the kinds of things that are getting very technical. You don't have time to worry about how many people are on the salesfloor, or whether or not you like somebody and would like to get rid of them. Do you understand the essential things that need to be done? Buying is not just understanding fabrics; the qualities and characteristics."

If this is not the environment young people want, then they should reevaluate their careers. If retailing sounds interesting, but sales does not, maybe they need to look at other aspects of retailing, such as operations, personnel, finance, etc.
I know my time is gone and you have a very busy schedule this afternoon. I've appreciated being with you; it's been enjoyable. I hope I've posed some questions to give you some thought. Thank you.

NORDSTROM: HISTORY AND PHILOSOPHY

Darrell S. Hume
General Manager, Utah Division

If there is anything I enjoy doing, it's talking about Nordstrom. I've been with Nordstrom since 1969 when I joined them from the University of Washington. I started selling menswear at a store in North Seattle, Hurricane Mall. I have been part of this company for the last 16 years and I have seen a tremendous amount of growth. I think most of you are western United States oriented, so you've also witnessed growth of Nordstrom.

I would like to give you a brief history of our company, where it started, and when, about our philosophies of the company and merchandising, and our attitudes toward customers and employees. Hopefully, at the end of my prepared comments you will have some questions.

Nordstrom was founded in 1901 in downtown Seattle as a shoe store by John W. Nordstrom, a Swedish immigrant. He came back from the gold rush in Alaska with some money in his pocket. He didn't strike it rich up there, but he came back with a few thousand dollars and joined up with a shoemaker in Seattle to open a shoe store. They operated that shoe store as partners until 1929 when his partner, Mr. Wallen, sold out to Nordstrom. Nordstrom sold the company the following year to his three sons who had grown up in the business and who had all graduated from the University of Washington. So, it was these three men, the second generation of Nordstroms, who took that first shoe store and built Nordstrom Company into the largest independent shoe retailer with 27 units grossing about twelve million dollars by 1963.

It was in 1963 when the company was looking to diversify and the third generation of Nordstroms were coming of age that Nordstrom Shoe Company purchased the Best Apparel Company which was a fine ladies specialty store in downtown Seattle. Over the next six years the company added seven apparel stores and the operation of the company was known as Nordstrom/Best. The third generation of Nordstroms now controlled the company.

By 1971, there were seven Nordstrom/Best stores with sales nearing $80 million. In 1973 the name was formally changed to Nordstrom and was known as the largest fashion specialty store on the West Coast, doing about $100 million at the time. I say it was known as the largest fashion specialty store on the West Coast in 1973--that was a very little known fact because we were oriented in the Northwest near Seattle and Portland.

Nordstrom has since expanded the Washington and Oregon markets and moved into Alaska, northern and southern California, and obviously, into the Utah market. Today, Nordstrom operates 40 specialty stores and had a 1983 annual volume of $788 million. We are hopeful of doing about a billion dollars this year. I think this year we will exceed Saks Fifth Avenue and in terms of volume, be the largest fashion specialty store in the United States.

As to future growth plans, it is primarily oriented in California. Just next month we are opening our third store in northern California, in Palo Alto. We have an additional three stores on the drawing board for the
northern California region over the next three years, two in San Jose and one in Marin County. That will make a total of six in northern California and over the next five to ten years we plan several more.

Southern California was our first entry into the California market, in Costa Mesa. I think we are currently operating about seven stores in the Los Angeles/Orange County/San Diego area. We're opening at least three more stores in Southern California over the next year and I would again estimate that over the next five to ten years, we will see substantial growth in that area. There's a simple explanation for concentrated growth in California--people.

In response to the Nordstrom philosophy, their merchandising philosophy, we use words like selection, quality, value, and service. I think a lot of retailers use those words and those words mean different things to different people. It has always been our intention to carry a broad selection of sizes and styles available. It goes back to the days when we were just a shoe store and John W. Nordstrom wanted to be all things to all people. That's not a typically successful approach to retailing, but he wanted to have shoes for everyone and be able to fit all sizes. What quality means to us is we want to have the finest quality available at a particular price category. That doesn't mean our store carries only high priced merchandise. Certainly we want to have the best merchandise we can find in each category, but we want to appeal to a broad base of customer.

Often I hear from people that they have the impression that we are an expensive store. I guess that's both good and bad. I don't want to scare any customers away. We want everyone to come into our stores and we sincerely feel there is a broad price category that pretty much satisfies just about everyone's needs. I say it's both good and bad because if someone were to have a perception of a store, I'd rather they have one of very fine quality than the opposite. The term value--that means we don't want to be priced higher than our competition. We are adamant about that fact. If anyone finds anything in our store that is priced higher than our competition, we will honor the lower price, and in fact, change our price immediately. We want our merchandise priced according to value.

Finally, service. That is really the first word in our company. We want to give personalized customer service. Service is a goal of every retailer, I would imagine, but it is our number one goal. We talk about it every day. We talk about it at every meeting we have. Everything we do is oriented around customer service. The more goals are talked about and the more goals are kept in the forefront, the more apt a store is to attain that goal. We continually strive to give good quality, personalized customer service and look for better ways to do this. I think we have a reputation for giving good customer service. In fact, I'm often asked, "What are your secrets?" There are no secrets. We get our people from the communities in which our stores are located, but we don't have a formalized training program other than orientation. At Nordstrom we have come to live by the adage that the only real difference among stores is how they treat customers. Every company and every buyer can go into the markets of New York, Los Angeles, or wherever, go to the same manufacturer, buy the same styles, and put them in their stores. In fact, companies that are well financed can spend millions of dollars and build beautiful stores with wonderful fixtures, but the success or failure of any store is determined by how the customer is treated. Nordstrom values our customer and total customer satisfaction is our underlying objective.
The Nordstrom merchandise return policy is an example of our commitment to total customer satisfaction. Simply stated, if a person wants to return something to us for whatever reason, he or she may. The decision is the customer's, not ours. We just don't want anyone to have anything in a closet that was purchased at our store that they're not happy with for any reason. Our return policy is one of our strong points.

The Nordstrom management philosophy is that sales people make the difference. It's the individual salesperson who represents our company to our customer. It is our intention to hire the best quality sales people we can find and there are certain traits we look for in people we hire.

First of all, experience in retail is not a prerequisite for us. It doesn't really matter what someone has done in the past. We look for certain personality traits because our business is one of waiting on customers and selling merchandise. We look for people who look good; we look for good grooming. I like to quote, "You never get a second chance to make a first impression." We look for people who have positive, enthusiastic attitudes and most importantly, we look for people who are very achievement-oriented. We ask that our salespeople have two characteristics when they wait on customers; that they be courteous and that they use common sense.

We ask they be courteous and acknowledge each customer as the customer comes into the store or comes into the department. Let the customer be assured there is someone there to assist them should they need some assistance. We ask that our people treat others as they would want to be treated; as if they were guests in their homes. We want our customers to feel comfortable in our stores.

We ask that salespeople stay in contact with customers and build their own personal clientele. We often relate it to setting up their own businesses. We say we will pay the light bills, pay the inventory, give you beautiful surroundings, so you can take it from there and build your own customer lists. The best way is to use the phone to let people know about coming events or new merchandise. We encourage them to send out a lot of cards, letters, and thank-you notes and really build up a personalized clientele.

I mentioned common sense. We ask that people use good judgement because we ask that our sales people make a lot of decisions. We don't tie the hands of our sales people with a lot of rules, regulations, and policies. We just want them to use good judgement and make decisions themselves as long as the decisions favor the customer.

Nordstrom has the philosophy that top management is to serve the rest of the organization. Our perceived structure is an inverted pyramid, with top management on the bottom. Top management regards their function as that of serving sales people and helping sales people serve the customer.

We encourage participative management in our company. We ask each employee to take pride in the operation of the company. We ask that they make decisions, that they offer input and suggestions as to how we can better run the company, take the initiative to get things done and to use their own creativity in the operation of the company.

All employees start on the sales floor. Promotions are strictly from within without exception. We put a tremendous emphasis on selling. Everyone is on commission including the department managers and buyers. Buyers are extremely responsive to the needs of sales people. In fact, we have separate buying staffs in each geographic region, such as Utah, in an effort to stay close to and respond to individual needs of each region. I think our company now has seven different regions with southern California
having three separate buying sets. Again, our intention is to be able to stay close to the customer, find out what the customer needs, and respond to those needs.

Goal setting is heavily emphasized in our company and it's essentially bottom row up, not down. In other words, we encourage every individual to set his or her own goals. We feel that an individual is more apt to attain goals if goals are set personally rather than having someone else tell them what they should be doing. We outline standards and we set our standards high, but we encourage every individual to set individual goals based on those standards. We hold a lot of meetings at all levels to emphasize goal setting and to give recognition for sales productivity and customer service.

In closing, our objective at Nordstrom is to create an environment that is conducive to a highly motivated work force. We attempt to develop professional sales staff consisting of individuals who are excited and informed about the merchandise and who are enthusiastic about their jobs and the company. Most importantly, we want sales staff who are friendly and helpful to every customer who comes into a Nordstrom store.

THE IMPACT AND GROWTH OF APPAREL IMPORTS AND HOW THE APPAREL INDUSTRY IS PLANNING FOR THE FUTURE

Ernest Mariani
Chairman of the Board and President, Pyke Manufacturing

Our industry--textiles and clothing--is a fascinating business. As the young people say, it really "grabs you." I think this industry will be around for some time; it does not appear that worldwide nudity will become fashionable.

Our apparel manufacturing industry is one that has been described as "a shooting star syndrom"---up like a rocket, down like a stone. All of us are well aware of many, many companies which have experienced overnight success and overnight failure. As one of our sales people said to me some 13 years ago when I joined our company, "Ernie, you can make money in a hurry and you can lose it in a hurry." How prophetic he was!

How many businesses do you know that have four product changes in a year? For us, it is a complete product change for spring, summer, fall and holiday. Consequently, with such product changes the industry is fraught with danger to create what I term, "Christmas trees in January." Such Christmas trees necessitate huge markdowns and perhaps business failures. The industry presents real challenges to all of us.

I noticed in your program that you are addressing the technology of today and tomorrow. Certainly high tech is important. However, I must confess to you as a businessman that I wonder what is high tech, what is medium tech, and what is low tech. Also, I ask you as educators, certainly for the apparel manufacturing industry, that you do not lose track of the importance of people and of people working together.

A company can have all of the high tech equipment available, but unless the merchandiser is working hand-in-glove with marketing and they, in turn, are working closely with manufacturing, distribution, and finance, a company can easily fail.

I would like to discuss with you this morning the impact of imports on the apparel industry. Why we have seen the tremendous growth of imports in recent years, what we members of the American Apparel Manufacturers
Association are attempting to do about imports, and what we manufacturers need to do to remain a viable, successful industry.

I know each of you have read considerably about the growth of apparel and textile imports. I don't want to "brutalize" you with facts, but perhaps a few figures will put imports into proper context. Our apparel manufacturing industry has lost some 250,000 jobs over the past ten years. We presently employ about 1,200,000 people, one million of whom are women.

Our industry is extremely important to the U.S. economy, considering the industry paid wages and benefits equivalent to $16 billion in 1983. The industry creates two to three times that many jobs in other industries; i.e., retail, transportation, service, etc. Forty percent of fiber consumed in the U.S. goes into the fabric used to manufacture apparel. The value of this fabric represents 50% of the total value of the output of the domestic textile industry.

In the U.S., there are 14,000 apparel companies, some with as few as 50 operators or less. The number of companies doing as much as one hundred million is small and only two public firms do over $1 billion.

A few figures on the growth of selected outerwear garments will point out the tremendous growth of imports. I'm using the term outerwear to include all suits, coats, jackets, skirts, dresses, knit and woven shirts and blouses, sweaters, trousers, slacks and shorts. Our company manufactures ladies sportswear; jackets, pants, skirts and blouses.

In 1973, the domestic industry produced 13.1 of these outerwear garments for every American and imports provided an additional 3.7 garments per person. In 1982, the domestic industry produced 12.8 garments per person and imports provided another 6.2 garments. While domestic production has not grown much in 1983 and 1984, imports in 1983 provided 7.1 garments per person and at the current rate, will provide 8.6 garments per person in 1984. Stated another way, 1973 imports provided Americans with 22% their outerwear garments. In 1984, imports will account for about 40% of those garments. Unless something is done to turn around the rampant growth of imports, we estimate that 1990 imports will account for 50% of all American outerwear garments.

While domestic production did not increase much between 1982 and 1984, imports have grown 600 million units. It took 10 years for imports to grow 650 million units, and in only two years, imports have grown an additional 600 million units. Imports have grown an average of 11% compounded over the past 11 years.

As you know, there are many other figures on the seriousness of the continual growth of imports and their damaging effects. The growth of apparel outerwear imports this year alone is equal to 32,000 jobs.

Why is there a continual increase of imports? I'm sure most of you have a good idea, but let me just touch briefly on what's happened. It is generally recognized that wage rates in many less developed countries average 10-20 percent below wage levels in the U.S. In a labor intensive industry like apparel manufacturing, this wage differential is often a sufficient reason to ship production off-shore. However, this low wage competition from less developed countries is only one of several reasons for the outward migration of the U.S. apparel industry. Let's take a look at some of the other reasons. Just as labor costs for making garments are lower in less developed countries, often the cost of raw materials (yarns and fabrics) are 10-25 percent lower than comparable costs in the U.S. Some of the reasons for this differential are based on the same lower wage rates. Some reasons are based on lower fiber costs.
Of equal importance in encouraging off-shore apparel manufacturing is the availability of short run fabric production lots from both knitted and woven textile manufacturers in other countries. The flexibility afforded the apparel manufacturer by these short runs has a tremendous economic impact.

Finally, as a byproduct of low off-shore wages, foreign apparel manufacturers can offer short run apparel production lots at a high maintained quality level. They can do this because set-up costs and retraining costs are quite low compared to the costs in U.S. factories.

Let's be honest with each other. Apparel manufacturers such as ourselves import as an industry about 25 percent of the imports. We do it, not because we want to or if we had our druthers, but in order to be competitive. In the blouse area, with high labor content, we are not competitive unless we import off-shore produced blouses. Retailers have also become manufacturers, with captive plants in foreign countries manufacturing for them.

The question then, is what are we, the American Apparel Manufacturing Association, going to do about it, and what is the industry going to do to remain a strong, viable industry?

In the Association's view, it is not in this nation's best interest to have an apparel industry with its marketing organizations here in the U.S. and its production facilities abroad. Nor is it in the interest of the retail industry to look to suppliers who are 13,000 miles away. The answer, however, is not to call for blind protectionism. No protective program can really last if it is simply designed to shield an uncompetitive industry from worldwide competition. Even if we could sell it for a time, I don't believe we could make it stick. However, it is necessary to buy time and to save jobs for our people. As mentioned, we do not believe in being protectionist, but we do believe in fair trade and in competing on a level playing field.

The American Apparel Manufacturing Association pledges itself to the maintenance of a strong, competitive domestic apparel industry with a continuing ability to provide domestic manufacturing employment at all skill levels for a large segment of the American workforce. The national interest requires no less and is best served through the cooperation of government and industry.

To compete with Least Developing Countries (LDCs) and exporting companies to the U.S., let me summarize economic conditions that must be changed:

1. Apparel manufacturing wage level differentials with LDCs must be overcome by capital substitution.
2. Textile manufacturers must likewise overcome wage level differentials by capital substitution.
3. Textile manufacturers must develop the technological ability to produce short-run production runs to compete with foreign sources.
4. Apparel manufacturers must develop the technological capabilities to produce short-run production runs at high maintained quality levels to compete with low wage foreign factories.

And, we must respond quickly to the needs and demands of our retail customers. Are such fundamental changes possible? We believe they are. Let me give you an example of an industry which through technological developments has become competitive. For one hundred years, until 1968, the vast bulk of women's hosiery was produced on Cotton's patent full-fashioned knitting machines. The operation of those machines required a
substantial amount of labor, particularly for set-up time when knitting specifications were altered. In addition, after the fabric was knit, a large amount of labor was required to loop and seam the hosiery and then to dye finish and package the product. During the five years subsequent to 1968, a total change occurred in the manufacturing of women's hosiery. As a result of a technological revolution, hosiery is no longer made on full-fashioned machines. Instead, it is manufactured on nearly automated circular knitting machines. The labor content required to manufacture a complete package of hosiery is about 25 percent of what was required prior to this change. Most importantly, as a result of this technological revolution and the resultant major investments made by the domestic hosiery industry, less than 2 percent of domestic hosiery consumption is now imported.

Instead of using our energies to fight imports, we should be mobilizing our talents and resources to create a climate of innovation. I'm personally pleased and the industry is pleased to have you consider items such as this at your conferences because from your meetings, studies, etc., will come innovations and leaders for our industry.

Further, it is important for manufacturers to continually look at sourcing—that is, where will our goods come from to our marketing/merchandising plan. This simply involves knowing what we are going to sell to whom and includes knowledge of a range of subjects such as marketing history, projections in units and dollars, market share by type of outlet, competitive position, and a careful examination of the entire range of marketing and merchandising areas which may require new programs.

Next, it is important for manufacturers to have a financial plan which determines how performance is to be measured. How sales and profits are to be obtained and what are necessary capital expenditures for new investment.

Finally, it is imperative that apparel manufacturers work closely with textile suppliers and the retailer, our customer. Rather than battling with one another, much more can be accomplished by working in concert. Just last week manufacturers met with the leadership of the retail industry to determine what we can do and how we can work together.

With all of us working together—education, business—viable industries can continue. It is necessary not just for the well being of our industry but for the well being of our country. Thank you.
BACKGROUND OF ACPTC; FUTURE EXPLORATION

Marilyn J. Horn
ACPTC President

I think Jan Else did a very excellent job of summarizing the historical background of our concerns about Futures of ACPTC and so I want to build upon the things that Jan brought out and reinforce some of the things Kate Kirkham spoke about yesterday. One thing she said that was an extremely good piece of advice was that in order to understand and facilitate change, we have to be better historians. We need to be better historians to know what is really changing and what is really innovative. To reinforce that idea, look back in the first issue of the Clothing and Textiles Research Journal where you will find the history of ACPTC written by Marjory L. Joseph. I would just like to read a few excerpts from that issue to help us be better historians in this regard. It says:

The Association of College Professors of Textiles and Clothing had its roots in the first half of the twentieth century. Changes in social, economic, and industrial conditions, as well as in home life (now think of this, this is in 1939), occurred at an accelerated pace during the first 40 years of the twentieth century. When war came to the world in 1939, the rate of change increased. Every area of college education needed to be reexamined to determine what was important. Home economists took this reexamination very seriously. They spent considerable time, working in groups through various organizations and agencies, reviewing what home economics offerings were and what they should be.

Are we doing that? It says that the original goal of the organization is to recognize that changing the curriculum in clothing and textiles is constant and will continue to be so, to provide the most up-to-date curriculum. That was way back when we got started. The goal of the subsequent conference in 1954 stated:

The purposes of this conference are (1) to examine the place of textiles and clothing in the total program of home economics and (2) to indicate the direction textiles and clothing programs should be taking in the future and the meaning of this direction for textiles and clothing curricula at the different levels of college teaching.

I think that helps you to see that we've been doing this and this examination has been a part of our background for many, many years. In 1956 we held a conference in Maryland with 17 representatives from each of the regions. They got together and looked at the textiles and clothing curricula. In 1961 there was another conference consisting of 18 people. Both of these conferences resulted in publications that appeared in the Journal of Home Economics. If you look back at the published reports in 1956 and 1961, recommending changes in clothing and textiles curricula, you will find that we have yet to implement many of the recommendations that were made that long ago. Now when Dr. Kirkham says that change takes time, you had better believe it. Part of the difficulty
is that those earlier conferences were very much like what we've been calling long-range strategic planning committees. You know, we've got one of those--AHEA. A small group of people--and they're over here and they're the committee of planners and they develop the espoused theory. They are the philosophers. And then you get all the rest of us over here who are the practitioners. And the practitioners are supposed to be implementing the philosophy developed by this little group of planners over here. So, you have one people developing the philosophy, the other people trying to implement the program and is it any wonder that we don't always implement the philosophy that we espouse? The image of any organization is created not by what a committee puts down on a piece of paper as a committee report; the image of any association is created by the collective action of its members. Those are the words of Kate Kirkham. Our visibility is not determined by a long-range planning report. It's not determined by a future development committee that's going to sit down and tell you what the future of the world is going to be like and how clothing and textiles can adapt to it. The future of clothing and textiles is going to be determined by the people who are practicing in the field of clothing and textiles. From those early beginnings, we settled into a format of having regional programs and national programs, and sometimes we look for speakers who are fairly entertaining and who give us a lot of information in a short period of time. So we listen to what is being said, but are we taking notes? If not, how much have we absorbed from the kind of thinking we get from speakers?

That was our pattern until about five years ago. There was a young person (I think we get a lot of stimulation from the young people that are coming into ACPTC) attending her first ACPTC meeting. She took me aside and said, "I come to these meetings looking for leadership and direction. I didn't come to be entertained. And I'm not going to spend my money coming to these meetings any more if we're not going to get that leadership and direction." Well, when you get someone saying words like that, you feel like crawling into the woodwork. But, then I thought, "Let's listen to this a little bit; let's listen to what's being said. Are we providing leadership and direction?" Her question was asked the year the Western Region established the Future Development Committee. Jan Else was president and the first chairperson of the Future Development Committee. I think that's important for me to say because it was the year after that, that the national association created their first Future Development Committee. This was an idea that was really generated in the Western Region. We did it in the Western Region first and then National thought it was a good idea and did a similar kind of thing. So, I think we can feel good about being a region that has done some very innovative kinds of things.

The national group that got together to plan for a Future Development Conference thought Hawaii would be the ideal place because we'd have everybody together and could get the whole group going on Futures. Well, as it turned out, the Hawaii group had been making their plans years ahead and the committee, in retrospect, thought maybe we could get off the ground a little easier if we started with a smaller group rather than getting everybody involved at once. You know, as Kate Kirkham says, get people involved at the appropriate levels. And, so instead of doing that national meeting in Hawaii on Futures, what we did was to write a grant proposal to Man-Made Fiber Producers Association and they underwrote the cost of a Futures seminar which we held in Minneapolis in April of 1983. We wanted to start with a small nucleus of people that were representatives from the
regions; we had seven people from the Western Region, seven people from the Eastern Region, and fourteen people from the Central Region. That's because Central Region has twice as many members as either Western or Eastern Regions. So the goals of that conference were set up. It says the overall purpose was to develop long-range goals and future directions for the field of clothing and textiles. The specific purposes were to become skillful in the use of forecasting techniques and methodologies, to investigate and discuss the philosophical foundation of textiles and clothing as shaped by future trends and to consider the potential outcomes of alternate courses of action regarding programs of work and administrative affiliation. Those goals were published, including a bibliography, to give people a background for reading in the futures field.

As a result of that conference, there were five recommendations that came from that group in Minneapolis. It expressed the concern that the concept of futures be kept alive. The suggestions for doing this were as follows: 1) making the Futures a permanent part of regional and national programs; 2) installing a Futures chairperson at the national level with regional counterparts; 3) having a Futures supplement to the Clothing & Textiles Research Journal; 4) maintaining communication among and within regions; and 5) planning a follow-up to that Minneapolis meeting.

There are additional points I would like to leave with you about the process of futuring. The first of these is, that we entered the period of the 1980s on a wave of futuring. I mean, 1984--this was the year that people had been waiting for for 36 years. The future is finally here. This is the year we were supposed to experience all those dire predictions that Orwell made 36 years ago, but the 1980s is also the period of Toffler's Third Wave and Naisbitt's Megatrends. We've seen the founding of the World Future Society; we've seen academic programs develop around the futures theory; we've seen think-tanks and all other kinds of things. We've been bombarded and saturated with prophecies, with predictions, and with forecasts. And all I can do is remind you that we have a constant need to focus on long-range objectives, and that is a task which is never done. That is the business we are supposed to be in.

The second thing is an observation. And the observation is that many of us in clothing and textiles are practical people. We tend to be doers. We are doers. We are action oriented. We expect an immediate response. I tried to get some of our graduate faculty to sit down and talk about some of the opportunities for the future. They did a little background reading and their general responses were, "We've read all about the electronic cottage. So what. Let's get down to something practical. How do we put all this stuff into practice? How do we put it into action?" We are action oriented. Sometimes we are so busy doing the doing that we never stop to ask why we are doing what we are doing. We get busy changing bylaws and running membership campaigns and making nominations and all the little busy work that we never get around to some of the big ideas. We are so busy putting out the fires that we never take the long-range look. Sometimes it might be better, you know, to let the thing burn down, collect the insurance, and start from scratch, building all over again. But we never consider that as a possibility. Are we trying to create an ideal or are we just trying to repair the existing program? Are we just rearranging the furniture to maintain what we have? Our speaker yesterday, Kate Kirkham, said we have to examine our core of convictions, our core of assumptions. The things we do habitually we take for granted. Now, let me give you one example of what I mean by examining our core of convictions or our core of assumptions. Also in the futures issue of the Clothing &
Textiles Research Journal there was a summary of one of the subregional groups. The groups developed a priority matrix and the two top priorities that people in clothing and textiles in this futures meeting reported were integration of new technology and closer ties with business and industry. They went on to say that there was another choice, which was increased international connections, and the authors concluded that the low rating received by this idea was very alarming. Now that represents somebody's assumptions. Do you see what I'm saying? It's a difference of assumptions. You are assuming that one thing is good and something else is not so good. I'm not talking about taking a vote on these things; I'm not talking about what we have consensus on. I'm talking about expressing our feelings that represent our assumptions. Kirkham says typically we've had feuds rather than strategies. Isn't it better to share our feelings and confront each other with our differences than it is to make the wrong decisions? I ask you to consider that a little bit. Talk it out. What we need to do is to engage in more "what would happen if" activities. In other words, we need to examine all our alternatives. What would happen if we did this? What would happen if we did that? And which of those outcomes do we perceive to be the most beneficial to us? We have to ask the why questions. People will say, "Why should we sit around wasting our time jawing about a bunch of futures that probably are never going to happen anyway?" It's the process of anticipating what could happen if we did such things. Sometimes if we don't ask "why" questions, we just take it for granted. We have to have greater visibility. Why do we need greater visibility? Because we need to attract more students. Why do we need to attract more students? Well, because we need to create more jobs. Why do we need to create more jobs? Because we need more memberships. Why do we need more memberships? Because we need more dues. Why do we need more dues? Because we need to carry out programs that will make us more visible. Well, you know, you've got to look at it. Some of those things are perfectly exempt. You have to answer some of those questions before you can decide whether or not you are putting your energies in the right place. Creating more jobs. Sometimes we forget, you know, that professions do not exist to create jobs. Professions exist to provide a needed service to society. So, I guess my plea is for us to share our feelings. Share feelings with each other. Confront each other with some of these assumptions and some of our beliefs. And let's dream together. What should we be contributing as an association? Let's dream of what we could be.

INTRODUCTION AND SUMMARY OF STRATEGIES FOR THE FUTURE:
A CHALLENGE TO ACTION

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As I thought about facing challenges, I thought about a partially filled glass of water. What is your perspective--is the glass half empty or is the glass half full? While thinking about challenges, I decided that I wasn't up to the challenge of writing a speech in one evening, so I did an outline before arriving here at the conference and then used the Futures Committee Reports to reinforce the ideas in question. I looked at five challenges as I reviewed the materials from the ACPTC Sub-Regional Meetings. Instead of looking at the opportunities, I examined the threats. I looked for areas in the threats and saw them not as threats but as
challenges. The first one was the challenge of knowing who we are and where we are going. The second was the challenge of keeping up-to-date. Third, was the challenge of reduced resources and support in our various schools. The fourth challenge that I saw was that of keeping a central focus on clothing and textiles. The fifth was the challenge of being a professional organization.

To understand the first challenge of knowing who we are and where we are going, I dug out a copy of the bylaws and looked up the purpose. If you haven't read it lately it states:

The purposes of the Association shall be to further education and science and more specifically, in the field of textiles and clothing, by improving standards of service and research in the public interest. Without in any way limiting the foregoing, but in expansion thereof, the Association shall improve and strengthen education in textiles and clothing; sponsor and otherwise support seminars, debates, symposia, conferences, and similar discussion of textiles and clothing; state and disseminate policy for professional guidance concerning the public interest in textiles and clothing; conduct research and identify and study social, economic, and psychological changes having implications for textiles and clothing programs and to bring these changes to the attention of the textiles and clothing profession and the general public; and encourage and promote a sufficiently full and fair exposition of pertinent facts involving legislation and public policy related to textiles and clothing as to permit an individual or the public to form an independent opinion or conclusion.

There is a lot stated in the purpose that can be done; the direction is there to help us know who we are and where we are going. In the book, *In Search of Excellence*, Peters and Waterman have a chapter that is especially fitting for textiles and clothing people. It has to do with doing what you do best. The title of the chapter is, "Stick to your Knitting." We need to recognize that our subject matter is an integrated part of people, of individuals, of families, of industry, and of commerce on a local, regional, national, and international basis. But as individuals, we cannot be all things to all people. And, as an organization we have more strength than we have individually. Together we can meet more challenges and serve more meaningfully. If we can affirm and support our commonalities and differences in large institutions, in small institutions with overlapping subject matter, diverse subject matter, specialized segments, I think we will be stronger as a group than as separate individuals. Therefore, as I see it, one of the challenges in knowing where we are going is to network and communicate.

The next challenge is keeping up-to-date. There is an almost ever-present concern about keeping up to date with information in the world around us. You can't get on a commercial airplane without looking at their current magazine and seeing an article on trend launchers. Many people are quoting Toffler, Naisbitt, and others who are examining the world around us. This challenge also means keeping up with our audience. After all, our subject matter is clothing and textiles, but our product is students and our responsibility is to keep close to them and to their needs. What are we providing them that will give them respect for our profession? The challenge of keeping up-to-date in our field means identifying state of the
art research, whether it is ongoing or completed, reviewing research abstracts, networking in terms of information from the various aspects of clothing and textiles. Keeping up-to-date in our field may also mean branching out. Someone clipped and sent me an article from Chemical and Engineering News on archaeological textiles and new findings in terms of analyzing ancient metals and finding textile imprints on them. We really do have many areas to explore. Kathy Hatch’s presentation yesterday was a new area relating clothing and textiles to medicine. All these areas are difficult to stay on top of. High technology may not be a challenge, but an answer to help us explore future challenges. We need workshops on how to use the new technology and then take these diverse ideas back to our students.

The next challenge I thought about was the challenge of maintaining resources and support. A legislator said recently to the extension service at our conference, "It is harder to cut programs that show results and make a difference in people's lives, and it is easier to cut individual positions." That really says something to us in terms of what we are doing and where we are going. Do we show results and do we make a difference in people's lives? Do we share success stories of recent graduates, sending information to their local newspapers? That can only help gain grass root support. What can we do for professional support, recognition for ourselves and each other and for our accomplishments? Some of those ideas were explored in the group-work yesterday.

The fourth challenge I see is keeping a central focus on clothing and textiles. At the clothing and textiles section meeting, "Future Directions in Clothing and Textiles", Elaine Peterson of Cal-Poly reminded us,

Families do not select their clothing and textiles products uninfluenced by the world around them. Professionals in the field of clothing and textiles investigating directions for the future should not forget the field's interrelation and connection with families and their total environment.

She challenged us to use interdisciplinary, qualitative, longitudinal and multiple-variable research. She saw this interdisciplinary research as a way for us to view our field with new insight and provide ways to expand our visibility into other fields. However, it seems to me that the pendulum swings back and forth, and it has swung almost too far in the other direction so that we have neglected our central focus on clothing and textiles and the universality of wearing clothes for aesthetic, moral, protective, and/or legal reasons. During the sixties we became, in my judgment, almost overbalanced toward the socio-psychological areas of clothing and textiles to the neglect of the aesthetics of clothing. And, when an area is neglected, a void is created. When a void is created, someone steps in to fill that void. We have the color and wardrobe consultant. We have wearables in art departments. If we neglect areas of our whole field, who is going to step in next and fill that area? Let's learn from history, as Kate Kirkham said, and not make the same error again by getting so specialized in any one area of our diverse field. Do we, as components of a technical, aesthetic, economic, social and psychological field move together? Do we support each other, or are we being fragmented and losing our forcefulness?

The next challenge is that of clothing and textiles being a profession and ACPTC being an organization which supports that profession. A profession has five basic characteristics: mission, research base, life-
long learning, a network, and self-regulation. We do have a mission. We have a stated purpose—perhaps it needs some clarification. Perhaps we need to communicate more for better understanding. As a group, we are working on strengthening our sense of direction. That has been a felt need and is one that is being met. We have a research base. We have reported some directions research needs to take and we have expanded our efforts into related areas. We have achieved visibility by having our own research journal. We should pat ourselves on the back for our journal. We have a program of life-long learning. We have a network of professional support and can communicate with each other and with persons outside clothing and textiles. Through the extension service, we can communicate research ideas and findings to the general public. However, I think the message has been very strong that we need to do a better job of nurturing leadership, networking, and giving recognition to each other. We must help ourselves, and think of ourselves in positive terms so that we support and recognize each other and our contributions.

Self-regulation is the last characteristic of a profession, and one which we could work at. We can emphasize the various processes of critical thinking, problem solving, decision making, and oral and written communication skills, but we cannot expect others to respect us if we do not regulate, do not challenge, and do not support each other.

In terms of a glass being half full or half empty, I ran across an article on burnout and I wondered if we were at a stage of needing to think about some of that burnout in relation to ourselves as well as to our profession. The author of the article which appeared in 4-H News and Views for 4-H Agents said in order to avoid burnout, it is important to develop a plan for managing stress. Start by taking care of yourself. We should give ourselves and each other pats on the back for the things we have accomplished. The author's next recommendation was to avoid getting into unnecessary stressful situations. Having a plan, having ideas, and having a direction to go is part of that. Get control of your job. Set goals. Plan ahead and manage your time. Maybe we need to do more priority setting and dreaming. Do not let a job take over your life; maintain a balance between personal and professional roles. With that I conclude the challenge. Thank you.

The membership divided into small groups to develop and prioritize strategies for the seven national topic areas. The groups received input from group leaders, added strategies, or further developed strategies already expressed, and prioritized strategies. Groups made three rotations among topic areas. The following is a report of strategies for the seven topic areas.

National/International Scope of the Field

1. Increase liaison with related international/national organizations (such as IFHE, International Color Authority):
   A. Encourage members to attend international workshops and seminars.
   B. Invite reports and articles from others for our publications.
2. Increase international membership and attendance at our meetings:
   A. Make meetings relevant to national/international concerns
   B. Promote membership by developing a brochure and attractive standing display to take to international meetings.
   C. Develop ACPTC chapter abroad
D. Reduce membership fees/registration fees for international members
E. Foreign students can provide contacts for prospective members
F. Have an international meeting outside U.S.A.

3. Develop an international task force:
   A. Write a quarterly newsletter or "What's New" report including trade; cross-cultural marketing; interactive political, economic, humanistic systems

4. Open membership to business and industry, especially to our former graduate students who live in foreign countries
5. Use Peace Corps as contact regarding jobs in developing countries
6. Develop a regional resource list to identify key people in/out ACPTC; experts in international law, public policies, etc.
7. Conduct regional workshops toward retooling in these areas.

**High Technology Priorities**

ACPTC should do the following:
   A. Encourage liaison with industry so members can work with and learn technology.
   B. Have workshops (probably associated with annual meetings) where members can work with and learn new technologies.
   C. Include in the Newsletter, evaluations of, and information about computer software written by and/or for our field.
   D. Assist members in knowing of and sharing software, video, other materials developed by members for their own use but which may not be published.

**Improve Visibility as a Profession**

1. On the national level, ACPTC should:
   A. Provide a forum for sharing information from related organizations such as a listing of articles with clothing and textiles emphasis
      -in fashion merchandising--NRMA, Advertising Age
      -in textiles--AATCC, ATMI
      -in apparel--Bobbin
      -in sociology--ASA
      -in psychology--APA
      -in design--Costume Society, Fashion Group
   B. Encourage external communication with other organizations
      -send other organizations copies of our publications
      -send representatives of our organization and receive and recognize their representatives
      -network with industry--encourage local advisory boards for schools
   C. Develop and publish an ACPTC membership directory by regions
      -provide title, interest area or teaching responsibility
      -provide business and home addresses
      -provide organizations

2. On a regional level, ACPTC should:
   A. Recognize member and student accomplishments in local papers and faculty newsletters
B. Promote clothing and textiles in high schools, career placement,
and community colleges; promote graduate opportunities in 4-year
colleges

3. Other visibility ideas received during prioritization:
   A. Have a national spokesperson
   B. Clarify professionals from non-professionals
   C. Increase political awareness of ACPTC members
   D. Recognize achievements of current programs
   E. Increase articulation among high schools, 2-year, and 4-year
      schools
   F. Share problem solving and recognize those who have solved
      problems
   G. Identify who we are and re-examine our image
   H. Develop visibility skills of members--especially oral
      communication. Learn new forms of communication
   I. Increase local involvement--articulate clothing and textiles to
      campus boards and administration

Leadership Development

1. Sponsor participation in workshops and seminars on leadership. These
   workshops may be national, regional, or local and are available in many
   larger communities. Seminars and workshops of this nature, conducted by
   individuals with expertise in leadership training, should be encouraged
   for members who are interested in developing skills.

2. Recognize and reward contributions toward leadership within our own
   ranks. Send letters of recognition to them and especially their
   administrators. The idea of mentoring recurred frequently, indicating a
   need among members for helping our colleagues and associates grow and
   develop in leadership roles. Create internal support and understudy
   roles for leadership positions.

3. We need to know who we are and where we are going. Develop priorities
   for our programs and curricula. Develop priorities for our national
   organization. Improve internal public relations by respecting the
   diversity, specializations, training, and expertise of each other. We
   must change our image of ourselves and our colleagues before we gain a
   better public image.

4. Prepare a regional (or national) membership list describing ourselves,
   our expertise, and special interests to develop networking alliances.
   Also describe the institutions we represent. A regionally developed
   list of textiles and clothing academics and specialists not associated
   with ACPTC would expand individual resources. Include business,
   industry, museum people interested in alliances and networking.

5. People who are concerned about leadership issues on the local level
   suggest that we begin to make it immediately clear that in academia,
   possessing leadership skills is not prerequisite for professional
   advancement in a college/university setting. We will hope that our
   leaders have vision, foresight, optimism, diplomacy, respect, and
   concern for others, ability to communicate, trust, enthusiasm, and can
   delegate, direct, follow-up, and evaluate. But the realities are that
   first, our potential leaders must satisfy academic degree requirements
   and establish publication records. At the same time, we need to
   recognize that fulfillment of these prerequisites does not assure
   competent leadership. Do not confuse prerequisites with criteria.
Other Suggested Development Strategies

1. Encourage students to form clubs and become involved with community organizations in order to develop leadership experience.
2. Encourage faculty to do the same.
3. Request that the national ACPTC organization identify leadership development as a critical need and support members in participating in existing leadership training programs.
4. Send a statement along these lines to local administrators to encourage their support for faculty participation in leadership training seminars. National or regional ACPTC should identify those seminars and workshops.
5. Poll members to find out who is interested in serving in leadership positions and what they are willing to contribute to the organization in terms of time and energy.
6. Create opportunities to make ACPTC visible in order to encourage development of a positive self-image for members as well as a positive community image. Create publicity--send p.r. materials to college and university administrators.

Program Development Priorities

1. Emphasize process oriented, critical thinking, problem-solving and decision making skills in oral and written communication.
2. Define the BA/BS degree in textiles and clothing
   A. Define necessary competencies and expertise
   B. All clothing and textiles graduates should have a common "core". Suggested areas are textiles, socio/psychological knowledge, aesthetics, historic, and cultural
   C. Consider accreditation to give power, recognition to departments
3. Maintain highly visible, diverse career outlets for graduates of Bachelors, Masters and Doctoral degree programs.
4. Increase interdisciplinary cooperation and collaboration among ACPTC members in teaching, research, and extension.

Facilitation of Research

1. Expand the theoretical base in the field.
   A. Encourage students to take theory courses in related disciplines and to integrate concepts with textiles and clothing.
   B. Incorporate more theory into coursework
   C. Do basic research which contributes to building a theoretical base.
2. Promote networking within the field.
   A. Develop a directory of membership and include research and teaching interests
   B. Develop support groups as sounding boards for research ideas and results (local level)
   C. Use telecommunications to reduce isolation problems.
   D. Continue to use Newsletter to provide listings of research, but separate out completed research from those in progress.
E. Be willing to share research instruments to help refine and validate them.

F. Develop inter-campus graduate degree programs. No Ph.D. program is available in the Western Region. Western Interstate Commission of Higher Education (WITCHE) would promote collaborations within region.

G. Create national center for textile and clothing research

3. Identify state of the art in our knowledge.
   A. Promote review articles
   B. Share abstracts—perhaps expand Clothing Index to abstracts and include M.S. and Ph.D. abstracts.
   C. Have more videotaped state-of-the-art programs at meetings.

4. Identify research topics which are salable (can be funded, published, etc.,) Develop ties with industry such as marketing, apparel.

5. Upgrade research skills

6. Recognize diverse methodologies in the field such as historical and design research.

7. Promote interdisciplinary collaborations. Have panel discussions on how to organize, conduct, current problems, etc.

8. Provide for mission-orientation of research. Promote networking with Extension, recognize and capitalize on Extension resources.

Service

1. On the National level we should:
   A. Foster working relationships with as many professional organizations as possible.
   B. Attend and support workshops, seminars, and related subject matter meetings.
   C. Need for Executive Director to be spokesperson and public relations agent for ACPTC.

2. On the Regional level we should:
   A. Promote business and advisory board
   B. Promote networking of members (via directory) and recruit new members
   C. Provide resources and support for reviews of textiles and clothing university/college programs.
   D. Continue subregional meetings.

3. On the local level we should:
   A. Share knowledge and expertise with on-campus and off-campus groups.
   B. Participate in career days and other activities for sharing career opportunities with the public (especially nontraditional type careers)
POSITION PAPERS

THE MEDICAL SIDE OF FASHION:
THE FUTURE ROLE OF TEXTILE AND CLOTHING RESEARCHERS,
TEACHERS, AND COOPERATIVE EXTENSION SPECIALISTS

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The potential of textiles to cause consumers' medical problems, both dermatological and toxicological, is a topic that has been largely ignored by clothing and textiles academicians and researchers. In graduate and undergraduate textiles courses discussion of a link between dermatological problems and textiles receives little or no emphasis. Textile researchers, in the main, have taken the attitude that the solution of problems of this nature are clearly outside their expertise. The position most widely held is that the problem is best addressed by dermatologists, toxicologists, epidemiologists, etc.

This position paper addressed medical evidence linking certain skin reactions to textiles as analyzed from approximately 250 references. It identified and described the types of skin reactions manifested, the specific component of the fabric causing the outbreak, and frequency of occurrence. In general, the presentation described the scope of the problem.

This paper outlined unanswered questions that need to be answered by research. It also defined ways in which clothing and textiles researchers, teachers, and cooperative extension specialists and agents can play important roles in solving this significant consumer problem.

Specific objectives were to determine: 1) What skin reactions result from wearing clothing, 2) Specific textile cause of the reaction, and 3) Frequency of the occurrence. Results indicated five types of dermatitis are caused or aggravated by textiles; namely irritant, allergic contact, atopic, phototoxic, and contact urticaria. Six fibers have been reported to cause dermatitis; two natural fibers and four man-made fibers. About thirty dyes and nine types of chemical finishes have been reported to cause dermatitis. Durable press treatments are the most common type of finish causing dermatitis. Information about incidence rates of textile induced medical problems is sparse, but evidence indicates a significant link between textiles and dermatology. Further research is needed and textiles and clothing researchers in land-grand institutions should take a leadership role to correct this significant consumer problem.

References:
COLLABORATION WITH INDUSTRY:
EXAMPLES AND IMPLICATIONS
FOR THE FUTURE OF TEXTILES AND CLOTHING

Doris K. Hime, Janet J. Else & George A. Morgan
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This organization, the Association of College Professors of Textiles
and Clothing, has been looking and planning toward the future for the past
twenty years. In Joseph's summary of the history of ACPTC, those early
"futures" discussions focused on the direction textiles and clothing
programs should take in the future and how that direction would affect
curriculum at different levels of college teaching (Joseph, 1982).

Focus on future directions has been top priority for the past two
years, beginning officially with the ACPTC Futures Seminar held in
Minneapolis in April, 1983. However, these recent discussions regarding
the future have been in the broad context of developing long-range goals
and future directions for the profession, as well as implications for
curriculum. Since the national Futures meeting in Minneapolis, sub­
regional meetings have been held to further identify and suggest goals and
strategies.

One of the opportunities and challenges for the future that
consistently seemed to surface was the strengthening of ties with industry
and business (Loker and Flynn, 1984). While in the past the emphasis in
our educational programs has been consumer oriented, should we now be
broadening that thrust to include more nontraditional areas, such as
industrial textiles, industrial construction processes, the use and
application of technology? Several subregional groups have said yes.

Fostering contacts with industry is not foreign to ACPTC. In 1971 the
theme for the fourth national meeting in Charlotte was "What do Textiles­
Apparel Industries Expect from Us?" (Joseph, 1982) At that meeting a
consumer panel was established consisting of six ACPTC members--two from
each region. The function of the panel was to serve as liaison with
Springs Mills, Inc. Following that meeting, liaison with ASTM was
established. That relationship continues to thrive.

Again at the seventh national conference in 1980 in Washington, D.C.,
speakers included representatives from business and industry. At that time
a meeting brought together representatives from ACPTC and the Man-Made
Fiber Producers Association (Joseph, 1982). In April, 1983, that group
gave financial support to the Futures Seminar held in Minneapolis.

The purpose of this paper is to offer some ideas for further
collaboration with business and industry. One of the advantages of such
working relationships is to communicate a positive image to those audiences
that are providing career opportunities for our students. Therefore, while
taking advantage of one of the opportunities that has been underscored by
discussions in the subregional groups, we will, at the same time, be
attacking one of our recognized weaknesses; poor visibility and image of
the profession.

After describing some characteristics of the Textiles and Clothing
Department at Colorado State University, this paper will take the position
that collaboration with the apparel, sewn products and retail industries
has strengthened the program in ways not possible if we had remained more
aloof from the industry.

There is no other four-year textiles and program in the state of
Colorado, but several public and private two-year colleges have programs in
fashion areas. Colorado State is a typical land-grand university. The Department of Textiles and Clothing is one of five departments in the College of Human Resource Sciences, formerly home economics.

The Department is fairly typical of four-year university programs in textiles and clothing, but larger than most. We are aware that sometimes because of size and numbers of majors it may be possible to offer a fairly wide range of concentrations and courses. However, we are not always convinced that quantity means quality especially when resources for state supported institutions of higher education are now extremely limited.

The department has eleven faculty members including one in Cooperative Extension. Enrollment in the Spring of 1984 was 358 majors with 2,820 student credit hours produced. Four concentrations are offered: merchandising, fashion design, apparel production, and general textiles and clothing. These concentrations emphasize different phases in the development of textile and apparel products, but are independent and mutually facilitating. For example, knowledge of textile properties is critical for students in each of the concentrations, and students who combine a knowledge of apparel production and merchandising are in especially high demand.

The undergraduate program produces students who are well educated for mid-level technical or managerial positions in the apparel and retail industries. The merchandising concentration is large and well established; the apparel production and fashion design concentrations are smaller, but appear to be on the threshold of growing enrollments. The apparel production concentration has been in existence only three years, but even in that short time, has produced students who have found textiles and clothing careers with apparel industries. That concentration is unique since it is only one of two west of the Appalachians approved for membership by the American Apparel Manufacturers Association Education Committee. The general textile and clothing concentration is quite small. Like most textiles and clothing programs, the research and graduate programs need to be expanded and strengthened.

In terms of facilities, three of the five departments in the College moved into a new building eight years ago. The facilities are excellent, but some equipment is aging and needs planned replacement. We have the usual laboratories for various levels of construction, design and textiles. The historic costume and textile collection houses over 7,000 catalogued items, one of the largest university collections in the country. Storage, research, and restoration areas have been carefully planned. Exhibits continually display items from the collection. Restoration and creating reproductions, especially in association with the theatre department, are an integral part of activities in the collection. Perhaps another unique facility is the textile printing laboratory. It is equipped with a Poly-Lite exposing unit, printing table, and Spectrum dryer to assist in the process of learning dyeing and printing techniques. The industrial apparel production laboratory has industrial knitting, cutting, sewing, and pressing equipment, some of which has been donated by industrial firms.

We offer a fairly wide range of courses in clothing construction; including flat pattern, draping, and tailoring; textiles; textile economics; socio-psychological aspects; fashion design and illustration; historic costume and textiles; and merchandising, including fashion merchandising promotions. Less typical offerings, which perhaps feature the unique aspects of the department include: a course in product knowledge, which may be used by merchandising students as a substitution for clothing construction, and a senior level course in clothing for special needs.
Courses emerging the past few years as a result of the new apparel production concentration are also rather unique. A junior level lecture course covers all processes of mass production from design to distribution. It is followed by a combination lecture-laboratory course where students experience the limitations and capabilities of industrial equipment. In the design area of apparel production we offer a course on pattern making and grading as it relates to mass production and separate courses on children's wear design and men's pattern drafting.

Our position in this paper is that significant progress will be made in the next few years in good part through expanded cooperation with appropriate industry groups. We would define appropriate industries quite broadly to include retail firms, mass apparel production firms, small design establishments producing few-of-a-kind garments, museums with costume and textile collections and other organizations dealing with the design, production, sales or promotion of apparel or fashion goods.

A description of what we have been doing at Colorado State University will follow. The examples provide concrete illustration of how we feel interaction with industry has been helpful to our faculty, students, and curriculum while in turn being beneficial to persons in industry.

Over the past decade, under the leadership of the former department head, Rex Richards, textiles and clothing faculty at Colorado State worked hard to develop close contacts and working relationships with professionals and companies in the retail, apparel production, and fashion fields. These activities resulted from a conscious effort based on departmental objectives. In fact, four of the nine objectives in the departmental code are supportive of department-industry interaction.

Some of you may have similar departmental objectives and have probably done many of the things that will be described. We make this presentation not because we have done so much, but to provide concrete examples that may be useful to you. We also hope to illustrate what we feel are needed changes for us as well as other textiles and clothing programs.

Before giving the examples, we would like to suggest a conceptual framework into which one can put most such activities. Figure 1 shows one way to look at possible types of interaction between academia and industry. On the left side of the diagram under the heading, "academia," are boxes showing textiles and clothing "faculty," "students," and their "campus." Of course, most of what we do in both teaching and research takes place solely on this side of the diagram. This paper deals, however, with what goes on between the left and the right side, which as you can see is labeled "industry," as defined earlier.

On the right side the boxes are labeled "executives" and "other professionals" to make a perhaps artificial distinction between those who might be invited to speak at ACPTC conferences or be a member of an advisory committee and on the other hand those, perhaps younger persons, who might be more likely to attend a workshop on campus or directly supervise a student intern. We have labeled the industry location "company" which refers to the plant, store, or museum at which industry persons work.

Note there are arrows from the faculty and students to the company and also arrows from industry persons to the campus. These arrows symbolize that academic people can go to the industry or vice versa. Note also that the arrows have two heads. This signifies information or advice can flow in either direction; from academia to industry or vice versa. In order to make Figure 1 more concrete, we will now present some examples from our experiences over the last decade.
Probably the arrow with which you are most familiar is that between "students" and "company." Almost all our students in merchandising and apparel production are placed in semester-long internships ranging geographically from the East to West Coasts. Internships vary from buying and sales management in department stores to pattern making and design for apparel manufacturing plants. While students bring enthusiasm and past experiences to internships, we assume that in terms of knowledge gained, flow is mostly from the company to the student. Other examples of this relationship between students and companies include study tours and career seminars conducted by groups such as the Fashion Group.

A second important arrow is the one between faculty and company. Several faculty have completed industry internships or sabbaticals at companies such as Jantzen, Pendleton, Levi Strauss and Springs Mills. Such industry experiences are what eventually led us into having faculty with enough expertise to teach first one course in apparel production, then to redirect several other courses toward that end, and eventually to begin an apparel concentration within the last three years. Some call it retooling. We prefer to think of it as meeting new and challenging nontraditional needs in textiles and clothing, using faculty resources that already existed. This past summer two faculty worked with a large department store in the area; they developed expertise in promotions and merchandising that have enabled them to teach more industry relevant courses. These efforts to move beyond the traditional home economics or textiles and clothing organizations are very important to the success of our program as we envision it developing.

The above examples emphasize what faculty could learn from industry. Hopefully, faculty also provide knowledge and service to companies. Some examples are textile testing for companies, training for specialty store
owners at the Denver Merchandise Mart, and consulting for a small apparel firm.

The third arrow we would like to describe is the one from industry executives to the campus. Several times in the last few years we have brought such leaders to the campus for seminars or workshops. In most cases we have invited and attracted a number of other professionals in the apparel and sewn products industry. For example, several workshops were held on campus this past summer. One featured designer and lecturer Charles Kleibacker. Another was conducted by Thomas Pinto, director of the Union Special Technical Training Center. A third was given by Debra Lindquist, owner of a color consulting firm. It takes a great deal of time and effort to plan and organize such seminars and workshops, but the benefits are mutually rewarding. Subject matter content on current topics is learned by students, faculty and industry professionals who attend.

The last arrow, the one between other industry persons and the campus has a wide variety of possible examples, with arrowheads that go in both directions. In the case of professionals attending a workshop on campus, the flow is probably mostly from campus to industry. A similar example is a tour of our facilities by visiting professionals. In contrast, many visitors bring their expertise and knowledge to our classrooms. When appropriate, we have asked alumni, recruiters, and other visitors to share their professional experiences with our students.

Finally, not shown in Figure 1, is mutual sharing of ideas and knowledge. This can take place in a number of settings such as the meetings of the American Apparel Manufacturers Education Committee or at conferences attended by both academic and industry people. The Bobbin Show and National Retail Merchants Association meetings provide such opportunities. Clothing and Textiles might also benefit if industry persons participated more fully in ACPTC.

While we have drawn all possible arrows, and searched for examples of most, they probably will not all be incorporated into the activities of any given department. With limited time and other demands, that is understandable. No department can, as you will hear again later, do everything, especially at the same time. However, we believe that, at least in principle and over a period of time, the optimal situation is one in which there is information and movement in both directions and some mutual sharing. This sharing and two-way exchange leads to many indirect benefits which will be described below.

Our premise is that most textiles and clothing departments, including ours, do only a limited number of activities that would fit the diagram in any given year. Further, we hypothesize:

1. activities which are done are mostly between students and companies,
2. most of the information flows from industry to campus rather than vice versa, and
3. there are few really mutual interchanges.

These informal hypotheses come from examining our own record over the last several years, but they should be tested with data from other campuses.

Our position is that it would strengthen the future of the field if we as faculty were more involved with industries, especially if they sought out our expertise or we shared more evenly. The academic fields of business and engineering have both managed to make their expertise valuable to appropriate industries. As a field, we should strive to do the same.

Our own efforts and experiences indicate there are significant benefits to be obtained from the types of interactions we have outlined.
Some of the benefits are the direct and obvious ones intrinsic to the activity. Thus, a student or faculty internship usually leads to increased knowledge for the intern. The same is true of a workshop, conference or study tour; participants learn new material. When we use an advisory committee we probably get helpful advice.

In addition, other perhaps less planned, benefits may result from interactions with industry. Some we have found include:

1. Donations or reduced cost for supplies, teaching materials and equipment. For example, we have received rolls of fabric and garments to use in the apparel production lab from members of our apparel and sewn products advisory board. Also, some of our industrial machines were given to us by companies as a result of sabbaticals there. Many of you know that Arthur McArthur of Jantzen made a slide-tape presentation available to ACPTC members, in part because of contacts made at the Portland ACPTC meeting.

2. Internships and job placement are not only examples of the kind of activity we are promoting, but are sometimes the indirect outcome of other interactions. For example, if faculty keep their eyes and ears open while attending a workshop, conference or tour they may turn up unexpected placements.

3. An improved public image may be an indirect benefit. Several examples of this also indicate that student awareness and sensitivity to opportunities pays off. A friend of one of our majors is a newscaster for a regional TV station. After frequently suggesting that he should do an interest spot on the activities within the department, she finally convinced him to do so during the week of the annual student interest group fashion show production. The resulting story, which included interviews with faculty and students about the departmental program, was used that week on regional television and then syndicated for national distribution. Through various means we heard back that the spot had been seen in a number of states around the country. If done well, that kind of coverage is good for the profession's image.

4. Maintaining contacts with industry persons including recruiters, intern supervisors, and alumni can lead to benefits to current students through, for example, presentations by such persons to classes and interest groups. Other benefits may include support for research, such as that on urinary incontinence in elderly women, and consulting opportunities or summer internships for faculty.

**Implications for the Future of Textiles & Clothing Programs**

We have just cited some examples of how a department of textiles and clothing can collaborate with industry. We now have the challenge of determining the future directions within our profession, one of which is learning from and sharing more with business and industry. We would like to reemphasize the value to students, faculty, and the programs of expending time and effort to develop and nurture collaborative relationships with appropriate textiles, apparel, sewn products, and retail industry persons. These efforts should be concentrated in activities of mutual benefit.

We believe our textiles and clothing programs can and will benefit academic programs and industry. However, we must evaluate our programs and
we must sell them to others. According to Horn's report on the April, 1983 national Futures Seminar, we cannot do everything (Horn, 1984). Before we can sell our programs to industry, we must determine our target market. One way to do this is to study the employability of recent graduates by determining who is hiring our graduates, what kinds of jobs they are holding, what skills they need, where they are being employed, where they could be employed, and where would we like them to be employed. These answers can help us determine strengths as well as weaknesses.

As Shim states, "One thing is certain about tomorrow's job markets: dramatic shifts will occur in employment patterns because of the growth of new technology. These changes are going to affect how we work and how we are educated and trained for jobs" (Shim, 1984). In order to plan for the future, we must communicate with people within the industry to obtain their feelings about what the future within the field will be, not only in five years, but even in ten years or more. As educators, we must read, retool and visually produce scholarly products that keep us abreast and enable us to keep our curriculum content updated.

The textiles, apparel and related industries have been hard hit by rising labor costs. Manufacturers and retailers have been spending large sums of money on new technology. Ultimately this will lead to full automation resulting in reduced labor costs. For instance, textile manufacturers are becoming fully automated by using computerized machinery and robots (O'Neal, 1984). Apparel manufacturers are using automated and computerized machinery in spreading, cutting, sewing, and pressing. Designing, pattern making, grading, and marker making are being accomplished with the use of computers (Kasten, 1984). Retailers are becoming more involved in producing their own private labels, and it has been predicted that automated individualized garment production will be available in the not too distant future (Heisey, 1984). All industries are relying on computer technology, and distribution centers are rapidly being equipped with automated rails, tracks, and other devices. At the latest Bobbin Show in Atlanta, computer software and hardware for apparel and sewn product firms were shown in abundance. Numerous seminars reflecting the growing emphasis on computers and new technology are being given by various associations, industrial suppliers, educational institutions, and others within the field.

What does this mean to us as educators? In reality, there will be fewer of the types of jobs that exist today in the industry, therefore, needed job skills will continue to change (Canadian Textile Journal, 1984). In a changing and uncertain world, we believe collaboration with industry can help us identify and grapple with such things as strengths, weaknesses, potential opportunities, threats, uniqueness, curriculum offerings, and missions for our programs (Branson and Jolly, 1984). The Futures meetings have made us look to the future and now it is time to take action. We believe collaboration with industries related to textiles and clothing is a good beginning. In fact, our curriculum offerings can be enhanced. We have found from consultation with employers that they are currently looking for students who have:

1. A broad general educational background including liberal arts.
2. Critical and analytical skills. They want mature graduates who "think for themselves," those who have reasoned judgement with emphasis on decision making.
3. "People skills". Those graduates who can work with others both individually and as a team.

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4. Communication expertise, both oral and written. Many employers are looking for graduates who are bilingual.

5. An international perspective, including cultural, social, and economic awareness.

6. An appreciation and basic knowledge of technological advances such as computer use and robotics.

7. Product knowledge. A broad background in textiles and clothing will provide knowledge in textiles, selection of designs and materials, and combination of colors. This background will also provide expertise for consumer education by emphasizing the rights and responsibilities of consumers in a market economy.

8. A specialization within one or more areas in textiles and clothing. Emphasis in design, apparel production, textile technology, and/or merchandising will enhance initial career opportunities.

Please note these eight curriculum objectives were ordered from general to specific, but were not prioritized.

We cannot try to do everything or we may become fragmented. However, all of us, in two- and four-year colleges as well as universities, can creatively combine parts or all of the industry suggested curriculum objectives into textiles and clothing courses by the way they are taught. For example, educators can include cultural differences, design, color, written and oral expression, "people skills," and analytical skills in a socio-psychological or historic costume course by the way lectures, tests, and assignments are structured.

The uniqueness of a textiles and clothing program should become apparent with a good curriculum. However, we must demonstrate this uniqueness to others. As Sproles suggests, we need to show how textiles and clothing are important aspects of national issues and priorities (Sproles, 1984). Collaboration with industries and businesses can help us pinpoint this uniqueness. It seems to us that our programs are unique because they can impart knowledge and provide specialization within the apparel and fashion fields.

As we work on determining our target market, developing a good curriculum, and pinpointing our uniqueness, we must also identify our goals or purposes. Some refer to these as our mission or our "real business." Whatever you prefer to call it, excel at what is done.

Each textiles and clothing program should have a definite task or mission. Each individual program cannot do everything; determine what you do best and then strive to do it best. However, all must: 1) creatively change curriculum content to meet needs of the future; 2) set long-range goals of five years, ten years, or more; 3) keep abreast; 4) work with other departments on campus, such as business, art and theatrical costume; and 5) keep the uniqueness of textiles and clothing programs.

The study of textiles and clothing is exciting and challenging; we must market our programs to potential students who are academically strong. We must sell our programs to our competitors on campus, but we must also work with our competitors. In addition, we must promote our programs to persons in industry. Since few industry personnel come from a home economics or textiles and clothing background, it takes considerable work to build credibility with them. We may have to go more than half-way to understand their needs and what they want, but if we do, it will lead to a bright future for our programs and for the textiles and clothing profession nationally.

In summary, we would like to reemphasize our position that collaboration with related industries and businesses is an asset in
determining and strengthening curricula, missions and the uniqueness of textiles and clothing programs. This collaboration can communicate a positive image to those audiences who seem to be providing career opportunities for students graduating from textiles and clothing programs. In addition, this collaboration must provide industries and businesses with expertise valuable to them.

Since we do not live in an ideal world, such issues as budget cuts, university and college reviews, and the combination and/or elimination of departments and programs are a reality today. In order to survive, our textiles and clothing programs must be promoted and strengthened.

Even though the three of us may differ somewhat about the following proposals, we believe all textiles and clothing educators should examine them objectively. Therefore, we challenge each of you to deal with the following proposals which may strengthen and promote textiles and clothing programs.

1. Invite related industries and businesses to membership in ACPTC.
2. Develop expertise valuable to appropriate industries and businesses and share it with them.
3. Require graduates of textiles and clothing programs to complete at least one course that covers all aspects of mass production of apparel from design through distribution.
4. Use industrial sewing machines and equipment to teach clothing construction courses for merchandising and apparel students.
5. Require all graduates of textiles and clothing programs to complete a course in industrial textiles.
6. Require at least one course in retailing for all graduates of textiles and clothing programs.
7. Require that all graduates of textiles and clothing programs not only complete one or more courses in computer use and application, but learn specific applications in textiles and clothing classes.

References:
Implicit personality theory predicts individuals will make judgments of others based on salient visible cues in the absence of other information. In fact, impression formation research has consistently shown that cues provided by clothing affect judgments of both the wearer and of things associated with the wearer. In our culture fashionability is oriented toward a youthful, fit appearance. Thus it is possible the characteristic of being fashionable is associated with youth and physical configuration and the trait of fashionability might be inferred from age and body type. The purpose of this research was to examine the manner in which age and body type of a model and garment fashion detail affect judgments of garment fashionability in light of implicit personality theory.

The experiment was a 3 x 3 x 3 factorial with an incomplete randomized block design. Three levels of body type (sizes 6, 10, and 14), three levels of age (18-25, 25-35, and 45-55), and three levels of fashion detail (current, three-year old, and six-year old fashions) were manipulated.

Subjects were 90 college aged females who volunteered to participate. The average age was 20.2 years. Each subject viewed and rated six black and white slides of six female models, three wearing different dresses and three wearing different suits. Garment fashionability had previously been judged by a panel of experts, whose ratings were found to be significantly in agreement. Each slide was rated on a series of unipolar adjective trait scales. Subjects' responses to the adjectives: fashionable, beautiful, current, new, fresh, and attractive were summed and used as the dependent measure of fashionability.

Results for suits and dresses were arrived at separately using analysis of variance. For dresses a significant main effect was found for all three independent variables: F(2,243) = 4.34, p<.01 for age; F(2,243) = 4.03, p<.02 for body type; and F(2,243) = 8.30, p<.001 for fashion detail. There was also a significant three way interaction, F(6,243) = 3.81, p<.001. For suits significant main effects were found for age F(2,243) = 7.98, p<.0001 and for fashion detail F(2,243) = 6.28, p<.002. There was also a significant age by body type interaction, F(4,243) = 5.67, p<.004.

Results indicated that people do use salient cues of age and body type when making judgments of fashionability. In fact, in the case of suits, the suit with the most current fashion detail was judged as least fashionable, thus illustrating the powerful effects of age and body type on judgments of fashionability. These findings imply that a cultural ideal or construct of fashionability exists similar to a cultural ideal of beauty and that this construct may be more potent in conveying impressions of fashionability than actual garment fashion detail.
EFFECTS OF MASCULINE, FEMININE, AND MIXED CLOTHING SETS ON EVALUATIONS OF FEMALE CAREER APPAREL

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Research on career apparel for women has indicated that formal, tailored, and concealing clothes are generally perceived as most appropriate. However, popular writers continue to recommend that women should not deny their femininity by adopting a business uniform; at the very least they should soften the tailored look with open necklines and/or embellishments such as ruffles. Unfortunately, such advice may not be in the best interests of business women. Several studies have suggested that when clothing is inconsistent with purported role, the effect is to reduce perceived competence. A similar effect may be produced by items within a given outfit that are perceived as inconsistent.

The objective of this study was to determine meanings associated with garments varying in coverage and/or embellishments and the effects of consistency versus inconsistency on evaluations of various apparel combinations. Specifically, this study was designed to investigate evaluations of feminine, masculine, and mixed outfits in terms of underlying perceptual dimensions.

A pilot study was used to select two suits and four blouses that varied in terms of perceived masculinity-femininity. These garments were photographed individually and in all possible combinations. Semantic differential scales were adopted from previous research to assess meanings communicated by the garments and garment sets. The pictures and scales were combined in questionnaires in four different orders and the questionnaires were administered to 200 university students drawn from a range of majors.

Analysis of individual garment ratings indicated that selection of items to reflect different levels of masculinity-femininity had been successful; ruffled suits and blouses were seen as more feminine than tailored suits and blouses and within the blouse conditions, low necklines were perceived as more feminine than high necklines. Factor analyses of ratings of the eight outfits yielded two reproducible factors, accounting for from 47% to 54% of the variance. These were an attractiveness factor and a professionalism factor. To insure comparability across conditions, variables loading above .50 on their respective factors were weighted by their respective average factor loadings and added to form indexes for attractiveness and professionalism. An analysis of variance was then performed for each index.

Both analyses produced significant F values. In each case, rank order of the means indicated there was no systematic effect for consistency. What did appear to affect the ratings along both dimensions was style of suit. The tailored suit paired with any blouse had higher mean scores on professionalism and lower mean scores on attractiveness compared to the ruffled suit paired with any blouse. In the attractiveness analyses, Scheffe tests indicated that three of the four tailored suit conditions were rated significantly lower than all ruffled suit conditions; the fourth was rated significantly lower than two of the ruffled suit conditions. In the professionalism analyses, three of the four tailored suit conditions were rated significantly higher than all ruffled suit conditions; the fourth was rated significantly higher than one of the ruffled suit conditions.
The main conclusion, at least for this set of suit-blouse combinations, is that the suit carries the main message with respect to both professionalism and attractiveness. Within-outfit inconsistency, in terms of pairing masculine and feminine garments, does not appear to have a systematic effect on either type of evaluation.

One implication of the results is that women concerned about impression management should focus on appropriate selection of the suit component of an outfit; within limits, the blouse can be varied and achieve the desired effect.

PERCEPTIONS OF FUNCTIONAL CLOTHING BY PERSONS WITH PHYSICAL DISABILITIES

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Special functional features in clothing designed for persons with physical disabilities should be sufficiently inconspicuous so as to avoid a stigmatizing effect when perceived by others. From a cognitive perspective, a special functional feature may be regarded as a novel stimulus upon which perceivers are likely to focus and use when making attributions. Yet persons with physical disabilities may be ambivalent toward the presence of even an inconspicuous special feature if it is viewed as different from the norm. The purpose of the present study was to explore disabled persons' perceptions of clothing styles incorporating functional features. Specific objectives were to assess: (1) the impact of drawing attention to a special feature on evaluations of a clothing style and (2) the cognitive dimensions of perceiving clothes designed for people with disabilities.

The first phase of the study involved a series of focused group interviews with 36 disabled students from colleges and universities throughout Northern California. Students responded to twelve color slides of clothing incorporating special features. On the basis of students' comments and clothing ratings, the stimuli for the questionnaire of the second phase of the study were developed. These stimuli consisted of ten line drawings of clothes with special features, along with 15 semantic differential scales. Two separate conditions were used to deal with the first objective. The first condition, "style only," involved only one view of the clothing style, whereas in the other half of the questionnaires the "salient feature" condition was present, i.e., a more detailed illustration and written explanation of the special feature was included along with the style. The questionnaires were distributed to a random sampling of disabled students by handicapped student offices in 72 universities throughout the United States. The present data are based up responses of 322 male and female students to the stimuli in the questionnaire.

Students had a tendency in the focus group interviews to rate clothing styles fairly positively but then to make some negative comments when the functional features were explained subsequent to the rating process. Similarly, a comparison of the two treatments in the questionnaire data, using Hotelling's T square statistic, revealed significant differences between the two treatment groups, all beyond the .001 level of probability. The evaluations of the clothes in the "salient feature" condition were more negative for all except two of the styles—a rain poncho and a dress with innovative, hidden snapped closures. In the case of two blazers suitable for career wear, the functional features were more favorably evaluated in
the "salient feature" condition, but the evaluative ratings were significantly lower. Pants or jeans with zippers in nontraditional locations were viewed as being the most conspicuous of the styles.

Separate factor analyses for each of the ten clothing styles, with the two conditions analyzed separately, resulted in three common clusters of attributes: (1) evaluative, (2) instrumental/utilitarian, and (3) novelty/noticeability. Preferences and perceived functionality generally appeared on separate cognitive dimensions, suggesting that factors like fashionability and attractiveness were more important than function and comfort in relation to styles liked.

These data suggest that negative connotations associated with special features are likely to impede acceptance of functional clothing. Thus, designers and marketers of special clothing are confronted with the challenge of creating acceptable styles as well as overcoming stigmatizing connotations. These data suggest functional clothing may be more acceptable when special features might also be found in mainstream fashion, are sufficiently innovative so as to improve upon the overall style of the garment, and/or are components of an already functional clothing style such as a poncho.

DISCIPLINE AND TEACHER'S DRESS: STUDENT PERCEPTION OF A TEACHER'S ABILITY TO DISCIPLINE RELATED TO TEACHER'S DRESS

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Due to increased incidences of behavior and discipline problems in the classroom, teachers need to be aware of every advantage available to them with regard to maintaining classroom control. By providing teachers with information regarding nonverbal communication and the images they present by their style of dress, teachers may be able to incorporate this into their overall plan for optimal classroom management.

This study sought to answer the following questions: 1) were students' reports of their perceptions of the disciplinary and classroom control skills of their teachers affected by the teacher's style of dress, and 2) how did students rate the disciplinary and classroom control skills of teachers, according to the style of dress worn by the teacher.

Sets of sketches of male and female teachers in tailored, tailored/casual and casual attire were rated by 300 high school students on five-point scales covering six aspects of discipline in the classroom. The categories were "Can Prevent Behavior Problems from Occurring," "Is Fair in Administration of Discipline," "Can Effectively Handle Behavior Problems as they Occur," "Is Able to Maintain Classroom Control," and "Is Strict Teacher." Chi squares were computed for each category to determine if there were significant differences in students' responses. Mean ratings on each category were also computed for each style of male or female teachers.

Results suggested that student perceptions of male and female teachers' disciplinary skills were significantly affected by the teacher's style of dress. Style of dress also exerted similar influences on perceptions of both male and female teachers. No one style of dress emerged as most favorable. Instead, particular styles of dress caused more positive ratings of some categories and less positive ratings for other categories.
Casually dressed male and female teachers were perceived as least able to be effective disciplinarians and as having the least classroom control, while teachers in tailored dress were perceived as being best able to prevent behavior problems, quickest to discipline, and most strict. The female teacher in tailored attire was judged to be the least fair in administration of discipline. Teachers in tailored/casual dress received ratings equally distributed between the highest and middle ratings, which indicated tailored/casual attire may be the "safe" choice for teachers who wish to avoid appearing as strict, overbearing disciplinarians, or on the other hand, as lenient and unable to maintain disciplinary control of the classroom.

THE EFFECT OF STORE IMAGE ON CONSUMER PERCEPTIONS OF DESIGNER AND PRIVATE LABEL CLOTHING

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The purpose of this study was to investigate consumer perceptions of designer label clothing and private label clothing when each was associated with a store having either a high prestige or low prestige image.

Designer labeling has become a major trend in ready-to-wear fashion. Due to changing distribution patterns and consumer attitudes, retailers are also branching into private labeling. According to congruity theory, individuals will evaluate and adapt their attitudes toward an object to be consistent or congruent with an existing frame of reference. Therefore, consumers will strive to keep brand image and store image consistent with each other.

The following hypotheses were tested: 1) perceptions of clothing will vary as a function of the brand label associated with it, 2) perceptions of clothing will vary as a function of the store image associated with it, 3) perceptions of private label clothing will vary as a function of the store image associated with the store where the clothing was purchased, and 4) perceptions of designer label clothing will not vary as a function of the store image associated with the store where the clothing was purchased.

Subjects for the study were 90 female undergraduate students from family life courses. A 3 x 3 factorial between-subject experiment was conducted with three levels of clothing labels (designer label, private store label, and unlabeled control) and three levels of store image (high prestige, low prestige, and unlabeled control) manipulated. Identical knit shirts were used for the stimulus items. Each subject examined one shirt with either a designer label, a private label, or no label, and a card telling whether the shirt was purchased at a high image store, a low image store, or providing no store information. A pretest established which stores and labels would be used. Subjects rated the shirt on 16 adjective items using a seven point bipolar scale for each item.

Analysis of variance procedures resulted in a main effect for label, $F(2,81) = 9.24$, $p < .001$, with the designer label being rated higher than the unlabeled control which was rated higher than the private label (means = 80.33, 77.43, and 69.10, respectively). No main effect resulted for store image. Although marginally significant, there was a trend towards a two-way interaction between label and store image, $F(4,81) = 2.16$, $p < .1$. The ratings of the private label varied as a function of store image. The
ratings of the designer label, however did not vary as a function of store image.

Results suggest consumers perceive clothing differently depending on labels carried. In addition, consumers appear to keep consistent their perceptions of a private store label and the image of the store with which the label is associated. However, a designer label appears to be perceived similarly regardless of the store with which it is associated. These results have important implications for retailers in their offerings of private and designer brand clothing in terms of store image.

NORMATIVE INFLUENCE ON CAREER WOMEN'S DRESS
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Mary Frances Drake, University of Tennessee

With ever increasing numbers of women entering the business world, a distinct market segment of career women is developing which promises to increase in size in the future. Marketers are interested in profiling and communicating with this new market.

Influence on consumer behavior can be in the form of information or norms conveyed from people and the media. One purpose of this study was to investigate the strength of normative influence (viewed as a desire to conform to others' expectations) on women's clothing decisions. A second purpose was to investigate the mediating effect of situational and personality characteristics on this influence. Personality factors were conceptualized as specific to one's career and included importance of clothing, anxiety in career, self-confidence in dress, and self-monitoring. Situational factors included visibility to superiors and public, implicit dress code, length of time in career, and career line. These eight factors were the independent variables in the study.

A random sample of 1000 career women subscribing to Savvy Magazine, a national business magazine targeted to executive women, was sent a questionnaire, resulting in a 59% return rate.

Respondents accepted the most normative influence from male superiors, followed by female superiors, female friends, female colleagues, and male colleagues. Less normative influence was accepted from the market than from personal sources; however, women's business magazines, dress for success books, and business clothing departments in retail stores offered some.

Principal Components Factor Analysis was used to reduce the number of influence sources to four influence factors which were analyzed as dependent variables. These included influence from work associates, people outside work, retail and fashion sources, and business sources. Multiple regression analyses were performed to determine relationships between the situational and personality variables, and the influence factors.

Significant bivariate relationships were found with all four influence factors and the independent variables of personality and career situations except visibility to superiors and public. Respondents accepted the most normative influence on their career clothing when they felt clothing was important, were aware of their own and others' appearance, were anxious about their careers, and had worked the shortest amount of time.
One-way ANOVAs indicated differences in amount of influence acceptance among levels of four demographic variables including age, income, children, and amount spent on clothing.

Findings imply that career women look mostly to men, who often are in roles of power, for normative guidelines in career dressing. Also, as personality, career situations, and demographics appear to affect clothing decisions, career women as a group may be comprised of several distinct market segments. Thus, marketers need to further study and continually monitor this changing market.

POSTER SESSION REPORTS

CLOTHING OUTSHOPPING BEHAVIOR IN A RURAL WESTERN COMMUNITY

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Over the past few years, researchers have focused attention on outshopping, the practice of consumers purchasing retail items outside their local trading areas. The purpose of this research was to investigate clothing outshopping behavior of women in an isolated rural community in order to determine if professional working women outshop more than non-professional working women and if consumer satisfaction or dissatisfaction with local retailing is associated with outshopping and to establish demographic characteristics which are good descriptors of the average outshopper.

One hundred women, whose telephone numbers were randomly selected from telephone directories, responded to a telephone survey. Thirty-eight women were professionally employed, twenty-nine women were non-professionally employed and thirty-three women were not employed. Professionalism was determined by the type of job and amount of post high school education required. Each subject responded to 15 questions regarding outshopping behaviors for their personal clothing items as well as demographics.

Data were analyzed using a multiple stepwise regression analysis with outshopping behavior as the criterion variable and satisfaction/dissatisfaction with local retailing, professional or non-professional status, full-time or part-time employment, and number of children living at home as predictor variables. Satisfaction with retailers, number of children living at home, whether or not the female head of household was employed part-time or full-time, and whether or not she was professionally or non-professionally employed were used as predictors. Three of the four predictor variables significantly predicted the criterion. It was found that a linear combination of satisfaction with retailers, the number of children, and full-time or part-time employment significantly predicted the percent of clothing outshopping, F=7.42, p<.0007. No differences were found between professional working women and non-professional working women on outshopping behavior. However, there was a significant difference between those women employed full-time and part-time. Full-time employed women were more likely to outshop for clothing. Chi square analyses revealed that dissatisfaction with local retailing was positively related to outshopping, chi square (1) = 9.65, p<.0001. Further chi square analyses revealed that women with no children were more likely to outshop than those women with children.
This research has implications for retailers in both rural communities and large cities. Since census data show that over fifty percent of all women work, it is reasonable that full-time working women outshop in order to meet their personal clothing needs. The survey revealed that forty-one percent of those women who are dissatisfied were dissatisfied with selection, while the majority of women were satisfied with prices, quality, services and convenience. Eighty-eight percent of all women, however, are willing to travel one to one-half hours to a large city in order to meet their personal clothing shopping needs. Thus retailers in rural communities are losing customers to larger cities. In order to deal with this problem local retailers should improve their selection of merchandise and carry more professional wardrobe items. Merchants might work together to sponsor activities that would create more shopping interest. In advertisements they should stress convenience and services offered.

THE EFFECTS OF PHYSICAL QUALITY AND BRAND LABELING ON RATINGS OF CLOTHING QUALITY

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The purpose of this research was to investigate the effects of physical quality and brand labeling on consumers' perceptions of clothing quality. Quality perception research suggests consumers often use "extrinsic" cues such as price, brand name, and store image, and "intrinsic" cues such as physical traits of a product to form impressions of quality. Previous quality perception research has primarily focused upon effects of extrinsic cues and has demonstrated that consumers' perceptions of product quality increases with increased product price, status of store image, and status of brand name. The few studies that have included intrinsic cues such as physical quality of a product have shown that consumers will use such cues, if they are easily perceived, to form impressions of product quality. However, when differences in quality are not easily perceived, consumers turn to extrinsic cues to discriminate among levels of product quality. The present research, therefore tested the following hypotheses: 1) Quality perceptions of clothing will vary as a function of the physical quality of clothing, and 2) Quality perceptions of clothing will vary as a function of brand label on the clothing especially when physical differences are absent.

A 3 x 2 factorial experiment was conducted with three levels of brand label (designer, unknown brand and unlabeled control) and two levels of physical quality (quality differences present and quality differences absent). Seventy-eight college students (13 subjects per cell) rated each of two similarly styled skirts on five aspects of skirt quality. All subjects rated the same high quality skirt. Subjects then rated a second skirt. In the labeled conditions the first skirt had an unknown brand label attached to it and the second skirt had either a designer label or an unknown brand label attached to it. In the unlabeled condition the skirts were designated as "skirt A" and "skirt B". For half the subjects the second skirt was of low quality (quality differences present) and for half it was of high quality (quality differences absent).

Analysis of covariance statistical procedures (controlling for quality perceptions of the first skirt) resulted in a main effect for physical quality, \( F(1,71) = 4.58, p<.05 \). The higher quality skirt was in fact
perceived as being of higher quality than the low quality skirt. A main effect also resulted for brand labeling, $F(2,71) = 5.90, p<.01$. However, a comparison of the means revealed the quality perceptions of both the skirt with the designer label and the skirt with the non-designer label were significantly higher than the control. In addition, there was no joint effect between brand label and physical quality. Results suggest consumers use physical quality as well as brand label as cues to clothing quality. However, they are not necessarily associating clothing quality with designer labels as was once assumed. Retailers need to be aware of how consumers perceive cues available to them (e.g., brand, price, etc.) to determine whether these perceptions are in accordance with overall merchandising strategy.

CONSUMERS' AND RETAILERS' PRACTICES AND ATTITUDES TOWARD ENERGY EFFICIENT CLOTHING

Sally K. Francis, Oregon State University
Sara L. Butler, Miami University, Ohio

Major objectives of this investigation were to explore the extent to which women consumers consider energy conservation in purchasing indoor sportswear for warmth and the extent to which retail apparel buyers consider energy efficiency in buying indoor sportswear. This study was unique in that previous research in the area of clothing purchase practices has not included energy efficiency as a variable.

The study was conducted in a large, midwestern metropolitan area. Subjects consisted of women who had been selected at random from the telephone directory as participants in a previous consumer survey. To achieve a purposive sample of sportswear buyers, all stores identified in the telephone directory as carrying women's apparel were contacted. The final sample sizes were 85 consumers and 18 retail buyers. Parallel mail questionnaires were developed for use with the two samples. Items reflected principles of energy efficient clothing such as fiber content, garment fit, fabric structure, sources of information on energy efficient clothing, and attitudes about concern with energy efficient clothing.

Four evaluative criteria used by consumers in buying indoor sportswear for warmth were investigated. Eighty-two percent of the consumers indicated fiber content was of special concern to them in purchasing indoor sportswear for warmth, garment cut or style by 75 percent, garment fit by 69 percent, and fabric structure by 61 percent. Frequent uses of clothing for indoor warmth as a result of the energy crisis were indicated by consumers: flannel, long underwear, layering, natural fibers, sweaters, knee socks, and slacks. Many consumers mentioned having changed their clothing practices to compensate for lowered thermostat settings in their homes. Consideration of warmth when choosing indoor sportswear was significantly correlated ($p<.01$) with all energy efficient clothing practices and attitudes except the belief that retail buyers consider warmth in selecting merchandise. Thus, consumers' practices and attitudes were consistent in this study.

Significant differences were found between consumers' and retail buyers' belief in potential energy savings through clothing selection and use ($x^2 = 6.76, p<.01$) and consumers' actual consideration of warmth in choosing indoor sportswear ($x^2 = 6.91, p<.01$). Over 80 percent of the consumers believed energy could be saved through clothing selection and use
and specifically considered warmth when choosing indoor sportswear compared
to 55 percent of retail buyers who perceived a potential energy savings or
believed consumers selected clothing with warmth in mind. Significant
differences were also found between consumers' and retail buyers' awareness
of the importance of fiber content for warmth \( (x^2 = 6.16, p<.05) \) and of
fabric structure \( (x^2 = 4.68, p<.05) \). In both instances, consumers gave
greater consideration to these criteria in selecting sportswear for warmth
than retailers believed.

Results of this study provide evidence that clothing strategies for
energy conservation recommended by researchers are being adopted by
consumers. However, retailers must be made more aware of their role in
merchandise selection and promotion which is more responsive to this need.
In the case of energy efficient clothing, the fundamental marketing goal of
meeting consumers' needs is not being met. Clothing satisfaction research
suggests this is the situation with other clothing needs as well. Further
investigation appears to be warranted; larger and more equal samples would
permit more sophisticated analyses.

BUSINESSMEN'S PERCEPTIONS OF PROFESSIONAL APPEARANCE IN WOMEN'S DRESS

Jane Larkin, Sharron J. Lennon & Ruth V. Clayton
Utah State University

The purpose of this research was to conceptualize the general
consensus of ideas of a number of professional men regarding acceptable
business dress for the professional woman. In particular, the intent was
to investigate perceptions of professional appearance by examining how age
and body type of a model and type of garment worn influence judgments of
professionalism.

Widely accepted impression formation research indicates perceptions
and attributions of personality characteristics will be assigned to persons
based on visual cues such as age, body type and clothing. While
individually these factors have been found to affect perceptions, no
empirical testing has assessed them in combination.

One hundred-seventeen subjects for the study were members of local
professional men's organizations. Tasks were administered at regularly
scheduled meetings of the groups. Subjects individually viewed and rated
photographs of six female models varying in age from 18-55 and in body type
from size 6 to 14, wearing either dresses or skirted suits. Subjects
responded to a seven point Likert type adjective checklist. Based on
previous research and factor analysis, subjects responded to the extent to
which the model possessed the following traits: businesslike, responsible,
prominent, successful, efficient, and professional. Scores were summed and
used as the dependent measure of professionalism. The range of responses
varied from 0 to 36.

Analysis of variance was used to analyze data. Responses to stimulus
dresses and suits were analyzed separately to determine if age and body
type of the model and garment fashion detail had separate and/or joint
effects on perceived professionalism. Data were also subjected to a t-test
between dresses and suits summing over age, body type and fashion detail
manipulations to derive an overall rating of professionalism.

Businessmen tended to rate those women wearing suits more professional
than women wearing dresses \( (t(116)=6.61) \). They also perceived the
professionalism of all women wearing suits equally regardless of age or
body type of the model. Fashion detail affected ratings in suits ($p<.001$). A moderate level of fashion detail was preferred. When wearing a dress, age of model affected ratings ($p<.025$). Older models were judged most professional. Body type of model and fashion detail also affected ratings of models wearing a dress ($p<.001$, $p<.0005$, respectively).

Apparently more appearance factors affect businessmen's perceptions of females when women are wearing dresses than when they are wearing suits. These findings will help women in business or aspiring executives to convey impressions of professionalism by means of their appearance, positively reinforcing work roles. Implications of this research for the professional woman are: 1) a woman's age, body type and choice of clothing will affect others' perceptions of her professionalism; 2) women wearing suits will be judged more professional than women wearing dresses; 3) only older women (45-55) will be seen as professional when wearing a dress; and 4) a moderate fashion detail in garments worn will increase judgments of professionalism.

FASHION KNOWLEDGE AWARENESS: DEVELOPMENT OF AN INSTRUMENT

Sharron J. Lennon, Ruth V. Clayton & Jane Larkin
Utah State University

The purpose of this research was to develop an instrument measuring fashion knowledge awareness to serve as a tool for researchers using diffusion theory as a model of human behavior toward fashion. The research objectives were to develop such an instrument having demonstrable validity and reliability and to establish the construct of fashion knowledge awareness as empirically distinct from the decision to accept/reject the innovation as fashionable.

Subjects were 90 college females, 86 high school females, and 72 homemakers for a total of 248 females whose average age was 21 (range=15 to 35). Each subject viewed and rated six photos of females on a composite measure of fashionability. Subjects also completed a measure of fashion opinion leadership, fashion innovativeness, the Fashion Knowledge Awareness measure and various demographics.

Based on diffusion theory, the Fashion Knowledge Awareness measure was designed to assess an individual's exposure to the existence of a fashion innovation through various mass media and retailer communications. Responses to the sixteen item measure were factor analyzed and submitted to varimax rotation. Four factors emerged indicating that overall fashion knowledge awareness results from a composite of distinct types of information based on different contributing sources. The four factors based on sources of information are newspapers, retail information and displays, fashion shows and fashion magazines, and general interest information. Reliability estimates yielded a coefficient alpha of .86, A Guttman split-half coefficient of .82, and a Spearman-Brown estimate of .82, all of which may be considered good.

Diffusion theory distinguishes between fashion awareness knowledge and acceptance of an innovation as fashionable. In accord with the theory, discriminate validity was established by showing that fashion knowledge awareness was not significantly related to subjects' judgments of garment fashionability. However, since fashion knowledge awareness is the first stage in the innovation/decision making process, it was expected that individuals high in fashion opinion leadership and fashion innovativeness
would also be high in fashion knowledge awareness. In fact, significant correlations were found between fashion opinion leadership and fashion knowledge awareness, $r = .48$, $p < .0001$, and between fashion innovativeness and fashion knowledge awareness, $r = .17$, $p < .004$. Since both of these correlations were predicted by diffusion theory, they both serve as measures of construct validity.

In the past there has been no instrument with demonstrated reliability and validity to measure fashion knowledge awareness. This measure based on the paradigm of the innovation/decision making process can potentially serve as a valuable tool to researchers using diffusion theory as a model of human behavior toward fashion change. Future research is planned to test the reliability and validity of the measure over various populations.

FA\S HION INNOVATIVENESS PREDICTORS: PERCEIVED ATTRIBUTES OF INNOVATIONS AND PSYCHOGRAPHICS

Nancy A. Morris, Montana State University

This study investigated the role of perceived attributes of innovations and psychographics in predicting fashion innovativeness in apparel. A descriptive survey design was used to achieve objectives of the study. The dependent variable was fashion innovativeness. Two sets of independent variables were used in the attempt to predict fashion innovativeness: perceived attributes of innovations and psychographics.

The questionnaire was administered to 181 undergraduate women enrolled in an introductory marketing course at a large midwestern university. The questionnaire consisted of four measures developed or adapted for use in the study: fashion innovativeness, perceived attributes of innovations, psychographics, and fashion information sources.

Principal statistical tests were factor analysis, stepwise multiple regression, and Cronbach's coefficient alpha test for reliability. Reliability coefficients for the measures were: perceived innovation attributes, .83; psychographics, .86; fashion information sources, .86.

Before the hypotheses were tested the psychographic measure and the perceived attributes of innovations measure were factor analyzed which resulted in four factors for the psychographic measure (fashion interest, self-confidence, venturesomeness, and body satisfaction) and three factors for the perceived attributes of innovation measure (relative advantage, perceived risk, and compatibility).

Respondents' factor scores on the perceived attributes of innovations measure and psychographic measure and total scores on the fashion information sources measure were entered into the stepwise multiple regression analysis. Three variables were found to be predictive of fashion innovativeness (relative advantage, fashion interest, and perceived risk). Results of the study provide evidence that perceived attributes of innovations are more predictive of fashion innovativeness than psychographics. The findings have implications for apparel marketers in that perceived attributes of innovations may be useful in predicting early adoption of new clothing styles.
WOMEN APPAREL SHOP OWNERS: 
DEFINITIVE PROFILES AND SELECTED CHARACTERISTICS

Nancy J. Morris, Colorado State University 
Kathryn M. Greenwood, Oklahoma State University

An entrepreneurial explosion is currently occurring in the United States. Women-owned enterprises are the smallest, but fastest growing segment of the small business economy. Purposes of this study were to investigate entrepreneurship characteristics of women owners of small retail apparel businesses and to examine relationships among form of ownership, size of store, length of ownership, functional area of retailing, extent of control and participation in operation. A questionnaire was sent to a random sample of women who had attended one of the nationwide workshops conducted by the Center for Apparel Marketing and Merchandising. Frequencies and percentages were calculated for responses on the 108 returned questionnaires. Entrepreneurship characteristics were summarized on definitive profiles. A mixed model analysis of variance was used to determine whether significant differences (p=.05) existed among relationships analyzed.

The majority of the women respondents were sole proprietors (45%) or partners (17%) in independently owned stores (100%) with annual sales volumes of less than $200,000. Respondents invested their personal savings (33%) and/or obtained loans from banks (39%) to start their businesses and 33% were required to have a co-signer for the loan. The percent of time spent by women in the four functional areas varied. More time was spent in management and supervision (35%) and buying and merchandising (29%) and less time was spent in accounting and record keeping (23%) and advertising and promotion (13%). As the size of the store increased, women maintained their levels of involvement in control of the stores and decreased their levels of involvement in store operations. Sixty-six percent employed an accounting or bookkeeping service. Women who had a corporate form of ownership had the lowest level of involvement in accounting and record keeping. As length of ownership increased, women became less involved in the day-to-day management of their stores, while they maintained a high level of involvement in making policy decisions. In conclusion, the women were found to be very involved in making policy decisions and in day-to-day management of the retail apparel stores they owned.

TELECOMMUNICATIONS AS AN ALTERNATE METHOD OF SHOPPING

Louise P. Young and Tom C. Peterson
Utah State University

Telecommunications is a subset of non-store shopping. It is a fairly new method of shopping that involves the use of various types of electronic equipment such as a home computer, videodisc equipment, television and a cable shopping channel. Telecommunication shopping, more commonly know as teleshopping, can be effective for different people in different ways. Teleshopping is not necessarily new but is on the increase. Non-store retailing has accelerated so rapidly that sales have expanded three to five times faster than those of traditional retail store outlets. Catalog sales are continually rising and mail order sales account for approximately four
percent of all consumer sales with an expected increase to 20 percent by 1990.

The recent rapid growth of teleshopping has been influenced by more demands on the time of the increasing population of working women. Higher energy costs, an increased value on leisure time, and a greater awareness and use of high technology as a growing part of the domestic lifestyle, have also been influential. Not only has the need for the study evolved because of the limited time element, but because of the increasing availability of telecommunications offering systems and the fact that very little actual research has been done on the subject.

The purpose of this study was to analyze interest in the use of telecommunications systems as an alternate method of shopping and to profile those consumers who were interested in this method. Independent variables used were education, work-status, income, willingness to travel to shop, comfort in the use of electronic equipment, use of catalog shopping, preference of video vs. catalog styles for viewing merchandise, and the perception of teleshopping as good or bad.

Consumers in this research were female heads of households, 18 years or older living in the state of Utah. The sample consisted of 202 females who were Mountain Bell telephone customers. A pilot test was administered in one Utah county. A Likert rating scale was used to record responses.

Kruskal-Wallis one-way analysis of variance was used to analyze data. For greater accuracy tabulating results, Kruskal-Wallis automatically corrected data for ties as the ranking took place. The confidence level for the calculations was established at .95.

Each hypothesis examined a determining factor of the identified consumer's interest in teleshopping. Education, catalog returns, merchandise seen on television, use of electronic equipment, and frequent use of catalog shopping all had a significant influence on the teleshopping interest of consumers.

CLOTHING STRATEGIES USED IN THE MANAGEMENT OF INCONTINENCE IN WOMEN IN NURSING HOMES

Patricia A. Wilson and Merry Jo Dallas
Colorado State University

Management of incontinence is an important aspect of daily living for any person who experiences this problem. In order to assist incontinent persons and caregivers, research efforts have focused on determining what problems exist in managing incontinence and the best way these problems can be solved. Six nursing home directors in Fort Collins, Colorado, were interviewed to ascertain the incidence of urinary incontinence among women in their care and to identify the current practices used to manage incontinent patients. Out of 391 female patients, 195 or 49.8 percent were identified as incontinent. While methods of management varied, most homes used a bladder training program of some type in conjunction with various products that were either disposable or reusable. According to the directors, degree of incontinence, patient's mobility, and cost of products were the main determinants in choice of products used by the homes.

In four of the homes directors stated that disposable products were preferred over reusables because of such factors as lower cost, less odor, patient psychological well-being, patient physical well-being, and convenience. Costs for these products were estimated to range from a low
of $6/day per patient for disposable bed pads to a high of $15/day for disposable pads used with reusable briefs. Attends, a disposable brief, average $.51/change.

A questionnaire was completed by caregivers in four of the homes housing 87 women to determine satisfaction levels with incontinence products both from the standpoint of the patient and the caregiver. A profile was completed for each woman including degree of incontinence, degree of assistance needed in dressing and toileting activities, and general well-being evaluations. The bladder rehabilitation potential was judged "poor" in 58 percent of the 87 patients. Reflex incontinence was checked as the most prevalent type in 51 of 87 patients. Forty-four percent of the patients were on a bladder rehabilitation program, which involves regulating liquid intake, as well as checking the patient every two hours. Fifty percent of the patients were identified by the caregivers as not being sufficiently alert and/or cognizant to be able to evaluate products. Product evaluation by the caregiver, patient, or both included ease of application, ease of removal, odor containment, maintenance of normal skin condition, urine retention, overall aesthetics of the product and personal comfort. Sixty-three women used Attends, sometimes with other products, including reusable and disposable panty liners or pads and sanitary napkins. Many of the more mobile and active residents preferred to select and use products they could care for themselves.

Incontinent consumers, who may number as high as 8 to 9 million in the United States, should be provided with product options resulting in an individual's maximum psychological and physical well-being. The ultimate goal of this project and a proposed wear study is to inform consumers who are managing this problem. A resource list of currently available products is available from the authors.

AN AID TO FACILITATE CAREER ADVISING:
A SLIDE-TAPE PRESENTATION OF TEXTILES AND CLOTHING GRADUATES

Janet J. Else, Colorado State University

Students, parents, and even faculty have a difficult time communicating career possibilities resulting from a college major in textiles and clothing. As faculty we are daily confronted with the question, "What can I do with a major in textiles and clothing?" Likewise, students have difficulty knowing how to proceed in locating a first job and lack the ability to sell a potential employer on hiring someone with their capabilities. They are often unaware of the wide range of career choices resulting from a major in textiles and clothing and of the potential for future career changes.

The objective of this project was to develop a slide-tape presentation which could be used to show career possibilities to high school students, incoming freshmen, and upper level undergraduates. The project was funded by a small grant from the university Office of Academic Advising.

Six graduates from the Department of Textiles and Clothing at Colorado State University were selected to be interviewed at their places of employment. Those selected represented careers in design, merchandising, and textiles and clothing education. Those chosen were working within a 70 mile radius of campus or were visiting the area.
An interview schedule was used in order to ask questions consistently of all interviewees. Questions were sent to participants prior to the interview and contained questions probing how the graduate obtained a first job, likes and dislikes of the first job, expectations held vs. realities, adequacy of educational preparation, and recommendations for future students. The interview was taped and numerous slides of each graduate were taken in the work situation.

Tapes were transcribed so a typed copy of each interview was available. A script was written from the transcriptions following the question and answer format using the most meaningful combination of answers from several interviewees. Tapes were edited to follow the script and appropriate slides were organized and synchronized to accompany the tape.

The resulting production has potential for broad use in faculty adviser training sessions, freshman orientation courses, pre-professional seminars, peer advising sessions and for viewing by prospective students and their parents. Since students graduating from the textiles and clothing program at Colorado State University are not substantially different from those graduating from similar programs the media might be useful to other schools for recruitment and classroom presentation.

DRESS AND POPULAR CULTURE
Sally K Francis, Oregon State University

Popular culture is a growing area of study and provides a theoretical framework for expanding and synthesizing knowledge of clothing concepts. This area of study is particularly relevant to students of design and merchandising and is a potential area for research. The Popular Culture Association, based in Bowling Green, Ohio, was founded in 1970, publishes several publications, and has a number of subject area chairs including one in clothing and textiles. "Dress and Popular Culture" is the first course based on this theoretical framework to be offered in a home economics unit.

Topics specified in the course outline include the mass uniform, dress and leisure, popular taste and beauty, clothing morality, and dress and popular entertainment. Six hours of social science are prerequisite to enrollment. Specific topics this past term included: "blue jeans and t-shirts," "clothing morality," "fads," "clothing lyrics in popular music," "dance and dress," "sportswear," "role portrayal in dolls and toys," "role portrayal in advertising," "politics of dress," "clothing problems and personal advice columns," "how to dress for success," "dress codes and etiquette," "best dressed lists," "beauty contests and popular taste," "disguise in dress," "theatre and film costume," "comedy and cartoons," and "comedy in theatre, film, and television".

A notebook containing a collection of clippings from popular magazines and newspapers is maintained in the library. Teaching techniques include guest speakers, cassette tapes, video tapes, slides and films. Students complete homework assignments designed to develop sensitivity to dress as popular culture, expand knowledge about specific areas in which popular culture is reflected in dress, and locate examples and illustrations of dress as popular culture. Reading assignments drawn from a variety of sources including the following:

* Cordwell & Swartz, *Fabrics of Culture*
* Ewen & Ewen, *Chanel of Desire, Mass Image and the Shaping of American Consciousness*
COMPUTER-AIDED APPAREL DESIGN AS AN INTEGRAL COMPONENT OF APPAREL DESIGN PROGRAMS: JUSTIFICATION AND IMPLEMENTATION

Annette J. Fraser, Utah State University
M. Jo Kallal, University of Delaware

This coordinated project was designed to justify computer-aided design (CAD) curriculum in apparel design programs and to examine how these programs could best be implemented.

Traditionally, apparel-manufacturing computer technology has been concerned with product development from the production viewpoint only, excluding the initial product design, or pre-production phase. While worldwide approximately 1200 apparel companies use computer-aided grading and marking systems, only a small percentage of these companies use computers in the product design area. Participants in a 1983 American Apparel Manufacturers Association sponsored a CAD/CAM seminar predicted the apparel industry will follow other industries by increasing CAD implementation.

A potential interaction problem exists between computer technology and the creative human element in the design area. This problem lies in the designer's attitudes toward computer processes, from the automation standpoint as well as a possible threat to creativity. To investigate this problem an instrument was developed to determine attitudes toward CAD. A sample of 125 designers, 125 patternmakers, and 125 production managers was randomly selected from a population of U.S. apparel companies employing a degree of computerized production. Analysis of variance was used to determine attitude differences among the three groups within four automation related areas: computer attributes, job related, production aspects, and physical aspects.

Further details of this report may be found on page 113 of these Proceedings.

FACTORS AFFECTING FRUIT GROWERS' USE AND CARE OF PROTECTIVE CLOTHING AND EQUIPMENT

Vera B. Keeble, Utah State University

The purpose of this study was to survey fruit growers to determine types of protective clothing and equipment worn while using pesticides and
how that clothing was stored and laundered. An attempt was made to relate growers' use of protective clothing and equipment to their attitudes and beliefs. Two questionnaires were developed, one to be completed by the fruit grower and the second by the person who laundered clothing worn while using pesticides.

Data were collected at area educational programs for fruit growers sponsored by the Virginia Cooperative Extension Service. Respondents completing Part 1 of the survey were 176 individuals, mainly owners of orchards with a mean size of 128 acres. Educational level of respondents ranged from fewer than 12 years of education to completion of graduate degrees. Forty percent of the 156 individuals completing Part 2 of the survey were the fruit growers themselves, indicating they normally laundered their own pesticide contaminated clothing.

Fruit growers in this sample wore only an average of two of six recommended items of protective clothing and equipment when mixing and spraying Parathion, a highly toxic insecticide. Less than 25% usually wore all recommended items. When asked to indicate which items normally worn when mixing and spraying Captain, a relatively non-toxic fungicide, fewer than two items of protective clothing and equipment were checked. For both chemicals, the two items most frequently worn were waterproof gloves and a respirator. Most of the sample indicated they wore work shirts and pants when using either pesticide. Fruit growers participating in this study did not dress appropriately to protect themselves from pesticide exposure through the skin.

To prevent absorption through skin, the literature indicates contaminated clothing should be laundered with care. Approximately 82 percent of this group stored contaminated clothing and about 85% washed contaminated clothing separately from other clothing items. Only one-fifth prerinsed or soaked contaminated laundry and only one-fourth washed such laundry more than once. About 55% of the group used the "normal" wash cycle and no more than 33% used the hot water setting recommended by research. Respondents in this sample were following some recommendations for laundering pesticide contaminated clothing and ignoring others.

Educational agencies and professional associations who work with fruit growers should provide comprehensive information on the use of protective clothing and the storage and cleaning of contaminated garments. Workers are possibly not wearing protective garments due to comfort factors. Continued research is needed to develop protective garments with fabric and design features conducive to worker comfort.

FASHIONS FOR INDEPENDENT LIVING: AN EFFECTIVENESS STUDY

Diane E. Lewis-Goldstein
Santa Monica College & California State University, Los Angeles

Home Economists and others concerned with meeting the needs of the disabled realize the importance of fashionable clothing as a rehabilitative tool. When clothing is both functional and fashionable it encourages independence and helps those with physical limitations present a positive image to the world.

In order to promote awareness of clothing needs of individuals with temporary or permanent physical limitations, a nine-minute audio-visual presentation, "Fashions for Independent Living" was developed. The slides show aesthetically pleasing, practical changes in ready-to-wear which would
initiate discussions of clothing adaptations for the physically disabled. Most garments presented were selected because they were considered suitable for a business atmosphere, but the narration emphasizes most would be effective for a variety of clothing needs and disabling conditions.

"Fashions for Independent Living" was evaluated for its overall effectiveness, educational value and suitability of adapted garments for business settings by students in university, community college and adult education classes who had some knowledge of sewing and/or clothing problems of the disabled. Over 90% of the respondents rated the presentations as either effective or very effective. The same percentage responded they had been introduced to new ideas.

This presentation is a visual addition to current literature pertaining to clothing for the disabled. Educators and others concerned with developing independence in disabled individuals, including dressing and clothing choices, will find the emphasis on fashionable career clothing useful in instruction. The presentation is available by loan for educational purposes only. Included is a written script, a set of color slides, and a cassette with either audible or inaudible pulse.

CLOTHING AND TEXTILES AT THE SECONDARY LEVEL:
IMPLICATIONS FOR HIGHER EDUCATION

Lavonne Matern, New Mexico State University

There is concern that principles of writing, mathematics, and science are not being taught in sufficient depth nor quality in high schools in the United States. The National Commission on Excellence in Education (1983, p. 24) addressed these concerns by recommending, "4 years of English, 3 years of mathematics, 3 years of science, 3 years of social studies, and one/half year of computer science" be included in the minimum requirements for a high school diploma. The Commission challenged all high school teachers to include applications of writing, mathematics and science knowledge to everyday life in the curricula. In order to help secondary home economics teachers meet the challenge, university home economics faculty, high school home economics teachers and the state home economics supervisory staff in New Mexico presented an in-service workshop to review and apply writing, mathematics and science knowledge to home economics subject matter content. This report deals with the clothing and textiles portion of that workshop.

Writing as a means of learning was recommended as an addition to learning activities such as experiments conducted on fibers and fabrics, specifying directions for use of equipment or writing summaries of comparative shopping activities. Student involvement in the evaluation as well as the writing of these reports was recommended.

An application of mathematical skills to clothing and textiles included several suggestions. Students have an opportunity to use and apply metric measurements on commercial patterns and equipment. Comparative costs of clothing and textiles can be calculated as well as interest charges assessed when garments are purchased on credit.

Often the care of clothing and textile items becomes prescriptive. Rather than being taught to merely follow directions on a care label, students could learn and apply appropriate scientific knowledge to the care of fibers and fabrics. Choice of laundry product and method of care could be used as an application of scientific knowledge.
University faculty teaching clothing and textiles have a responsibility to provide home economics education majors with the necessary knowledge to enable them to teach others. This workshop offered home economics secondary teachers the opportunity to review writing, mathematics, and science knowledge appropriate for their teaching areas. Faculty in higher education were provided an opportunity to interact with and learn the needs and concerns of high school teachers. As a result of the workshop, several proposals have been submitted to the State Department of Vocational Education to establish future workshops in clothing and textiles.

Reference:

ABSORBENCY OF TERRY TOWELS WHEN LAUNDERED REPEATEDLY WITH VARIOUS TYPES OF FABRIC SOFTENERS

Patricia A. Wilson, Colorado State University

The purpose of this study was to measure the effect of rinse cycle fabric softeners, dryer cycle fabric softeners and detergents containing fabric softeners on absorbency of towels when laundered repeatedly.

Equipment specifications described in the proposed ASTM Standard Test Method for Surface Water Absorption of Towel Fabrics was constructed. Pilot studies using the proposed procedures were carried out to identify refinements necessary. Additional controls were added to insure reproducibility of the procedure and to increase accuracy of measurements. Five uncut white terry towels having the same specifications were purchased, coded and laundered 25 times using Downy, a rinse-added liquid fabric softener, five using Bounce, a dryer-added sheet and five using Bold 3, a heavy-duty laundry detergent containing fabric softener chemicals. An additional five towels were laundered and dried without fabric softeners to serve as a control. All towels were conditioned in standard atmosphere prior to each set of measurements. Six measurements of rewetting (absorbency) per towel were taken after 1, 5, 10, 15, 20 and 25 laundry cycles. The volume of distilled water at 21 ± 3 degrees C. retained by six areas of the towel were averaged and recorded as a percent of total volume of water added to the towels. Analysis of variance among various treatments of laundry cycles was computed.

There was a significant difference in absorbency after 1 and 25 laundry cycles between the rinse cycle additive, Downy, and each of the other treatments including the control. This difference was significant at the .05 level after the first laundering and significant at the .01 level after laundry cycle 25. Bound, the dryer-added sheet, was not significantly different from the control after 1 or 25 laundry cycles.

Contrary to published literature, a significant decrease in absorbency due to fabric softener build-up was not shown, except in the detergent containing fabric softeners, Bold 3. Unexpectedly the control increased significantly in absorbency from the first to the 25th laundering. Downy, although significantly different in absorbency when compared to the control, remained at the same low level from the first to the 25th laundry cycle.
Based on the findings, in products such as towels and diapers where absorbency is an important performance factor, dryer cycle fabric softeners affect absorbency less than rinse cycle types or detergents containing fabric softeners. Although rinse cycle additives did not increase absorbency through fabric softener build-up, they appeared to significantly decrease absorbency immediately upon first use and thereafter when compared to other types of available softeners and perhaps should not be used on products where absorbency is of prime concern. Detergents containing fabric softeners appeared to show less immediate effect on absorbency than rinse cycle additives, but with continued use they exhibited build-up resulting in decreased absorbency.

Greater information should be available to consumers regarding the positive and negative aspects of fabric softener use, particularly in products where absorbency is a major consideration. The media promotes only the positive attributes of softeners which when evaluated in relation to towels are relatively unimportant. Increased softness can be obtained by tumble drying. Elimination of static cling is unnecessary when laundering towels due to the inherent resistance of cotton fibers to static build-up. Yet towels are one of the major items pictured in advertisements of fabric softeners. Consumers may unknowingly increase the cost of laundering by 4.4-8.7 cents/per laundry load when using fabric softeners, while decreasing the most important property a towel or diaper needs, that of absorbency. If softener products vary in effect on absorbency, then consumers should be aware of these differences so that informed decisions on the use of selected products can be evaluated.
ACPTC-WR BUSINESS MEETING
Saturday, October 20, 1984
Sheraton Hotel and Towers
Salt Lake City, Utah

1. Call to Order: The meeting was called to order by President Charlene Lind.

2. Introduction of ACPTC-WR Council Members: Charlene Lind introduced the officers and noted that Merry Jo Dallas was the president-elect and incoming council members were Mary Kefgen, Rose Fedorak, and Anne Fehringer.

3. 1983 Minutes: Since the members did not yet have access to the written minutes in the proceedings, the secretary was asked to read them from her copy. These minutes were approved as read. A motion was made to continue to include minutes of the business meeting in the proceedings but also to enclose them in the president's fall letter. This motion was approved.

4. Financial Report: Mildred Crawford reviewed the Statement of Support, Revenues and Expenditures and Changes in Fund Balance. She reported that the fund balance at the end of the year was $9,945.65. The motion to accept the financial report was approved.

5. Membership Committee: Ellen Goldsberry reported that state representatives had been asked to contact current and non-current members in their states. Western Region now has a total of 167 members which represents an overall increase of 10 this year. Reserve membership increased by five and graduate student membership by seven whereas active membership declined by two.

6. Proposed Budget: Mildred Crawford reviewed the proposed budget for next year. This budget had already been approved by the Executive Council and therefore was presented at the business meeting for information only. The treasurer was commended for her work in this position.

7. Nominating Committee: Jean Margerum indicated that Merry Jo Dallas is the president-elect and Mary Kefgen, Rose Fedorak and Anne Fehringer are the incoming council members. First alternate is Susan Wright, second alternate is Carol Stith, and third alternate is Ernestine Porter.

The straw vote on preferred dates for regional meetings resulted in 29 votes for summer, 25 votes for October, 3 for other options, and 15 blanks. Comments from the membership included concern about obtaining travel support in June, commitments to summer school in July, and overlap with other meetings in October. It was suggested that the date be flexible to suit the planners at the host institutions and allow for possible dovetailing with other meetings although some concern was expressed about members' needs to submit travel plans well in advance of the conference. It was also suggested that if another survey is taken, a category of "no preference" might be helpful in assessing the opinions of the membership.
8. Bylaws and Handbook: Audrey Gieseking-Williams reported on editorial changes in the regional bylaws to make them consistent with the national bylaws. These changes included deleting references to associate members since this category no longer exists, indicating that the president serves as counselor following the term as president, and changing references to our governing body from board to council. Representatives to the national board now include two elected representatives plus the president. We now have a total of 13 voting members on our council and 3 nonvoting ex officio members for a total of 16. In addition, modifications were made to reflect the fact that active membership in ACPTC is now open to people from any country, provided that they meet our requirements. References to ACPTC proceedings have been changed to publications to reflect the fact that we now have three publications.

Additions to the section on committees were made to indicate that the chairman of the Regional Bylaws and Handbook Committee serves on the national Bylaws and Handbook Committee and the Chairman of the regional Nominating Committee serves on the national Nominating Committee. Article XII was modified to indicate that the membership year shall be from September 1 to August 31.

Following coverage of these editorial changes, Audrey Gieseking-Williams reviewed proposed changes that will be submitted to a vote of the membership. These include: 1) extending the time for return of election ballots from thirty to forty-five days; 2) in case of vacancy in the office of counselor, having the previous past-president fill the unexpired term; 3) indicating that regional representatives may not be elected to serve consecutive three-year terms as representatives on the ACPTC National Executive Board (to clarify the fact that a member may become an elected national representative after serving on the national board in the capacity of regional president); and 4) providing that the counselor shall serve as a member of the Finance Committee and, after consultation with the president, may serve on one or more of the other standing or ad hoc committees. In connection with this fourth recommendation, it was further recommended that to facilitate carrying on of the activities associated with the position, the counselor be made a voting member of the council. Additional recommendations included: 5) approving the annual program of work submitted by the president-elect prior to adoption of the annual budget; 6) changing the composition of the Finance Committee to include the treasurer, president, president-elect, and counselor; and 7) allowing members forty-five days to consider changes in the bylaws. One additional recommendation to be considered by the membership is that the annual meeting should not be used as a money-making venture. In a discussion of the recommendations, it was suggested that a category for personnel from industry be considered for inclusion in the bylaws. It was also noted that a new membership brochure is available for use in recruiting new members into the association.

9. Publications: Kathy Hatch reported on concerns about the financial commitment needed to support the three publications currently being sponsored by the association. She reviewed three main recommendations of the present ad hoc Publications Committee as follows: 1) establish a standing Publications Committee; 2) establish a publications fund (determine publication costs and decide which costs should be charged to
the fund); and 3) provide for an executive director and a managing editor as two separate positions. She also noted that there is a need to define the structure of the Clothing and Textiles Research Journal. At present, the journal does not have an editorial board, regular publication dates, or a mechanism for submitting volumes to libraries.

Dr. Hatch indicated that she would appreciate additional input regarding publications. Until December 31, she can be contacted at 209 White Hall, Washington State University, Pullman, Washington 99164-2020. After that date, she may be reached at the Department of Clothing, Textiles and Interior Design, University of Arizona, Tucson, Arizona 85721.

10. Newsletter: The new editor of the newsletter is Marie Carver from Rutgers. The call for articles should be out this month. No changes in format of the newsletter are planned until the ad hoc Publications Committee has a chance to address this issue.

11. ASTM Report: Ellen Goldsberry noted that several issues in the consumer product performance area are being considered including standards for snaps, men's and boys' woven shirts, swimwear, and household products. Flammability continues to be of great concern. Active committees at this time include the apparel sizing committee, the home sewing terminology committee and the liaison committee. Dr. Goldsberry indicated that members with any concerns about issues related to ASTM activities should contact her.

12. WRCC-23 Report: Merry Jo Dallas indicated that Kathy Hatch is the new chair and Marsha Morgado is the new secretary. Tom Peterson is in charge of distribution of publications. The committee has received approval to continue its activities for the next three years. As part of these activities, the committee will continue to compile the Research News Notes. Material is available on thermal comfort. The group also intends to continue networking with extension people. Plans are being made to begin a research project.

13. 1985 Conference: Margaret Rucker reported that the 1985 conference will be held in Napa, California on October 23 through October 25.

14. ATMI Tours: Charlene Lind noted that ATMI plans to continue their educational tours. Members of the council discussed preferred dates and concluded that there was interest in the tours but it was impossible to specify a date that would be convenient for everyone. Anyone interested in participating should contact Charlene Lind.

15. President's Report: Charlene Lind noted that some work had been done on futures issues and increasing communication with members. With respect to the latter point, she mentioned the two president's letters.

16. 1984-85 Plan of Work: Jean Margerum proposed to continue to examine our goals and assumptions in long range planning through Futures work, and, in addition 1) develop innovative teaching materials generated from and built on our Futures work as well as from the research, discussions and papers emanating from this meeting, as well as 2) strengthen membership through encouraging textile and clothing teachers in foreign countries to join ACPTC.
17. Charlene Lind was thanked for her work as president and Tom Peterson was commended for organizing an outstanding conference.

18. Jean Margerum noted that her university had back issues of WWD and DNR that could be obtained by anyone willing to pay the postage.

19. The meeting was adjourned by President Jean Margerum.

Respectfully submitted,

Margaret Rucker
Margaret Rucker, Secretary
ASSOCIATION OF COLLEGE PROFESSORS OF TEXTILES AND CLOTHING - WESTERN REGION

Statement of Support, Revenues and Expenditures and Changes in Fund Balance
For ten months from December 1, 1983 to September 30, 1984

SUPPORT AND REVENUE

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<th>Support:</th>
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<td>Dues</td>
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<table>
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<th>Revenue:</th>
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<tr>
<td>Dividends</td>
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Total Revenue 932.30
Total Support and Revenue 2,129.30

EXPENDITURES

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<td>Office Supplies &amp; Postage</td>
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<td>Seed Money for Salt Lake W.R. Conference</td>
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Total Expenditures 593.85
Excess of Support and Revenue over Expenses 1,535.45
Fund and Beginning of Year 8,410.20
Fund Balance at End of Year 9,945.65
ASSOCIATION OF COLLEGE PROFESSORS OF TEXTILES AND CLOTHING - WESTERN REGION

Balance Sheet
September 30, 1984

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<tr>
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<th>LIABILITIES AND FUND BALANCE</th>
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<tbody>
<tr>
<td>Total Liabilities</td>
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Fund Balance:

- Fund Balance, December 1, 1982 $8,410.20
- Excess of Support and Revenue over Expenditures 1,535.45
- Fund Balance, November 30, 1983 9,945.65

Total Liabilities and Fund Balance 9,945.65

Investments Note:
- Centennial, $234.27 earned with a monthly average of 9.1% yield.
- Oppenheimer, $618.03 earned with a monthly average of 11.1% yield.