

MISSED OPPORTUNITIES FOR  
CLUSTER BASED ECONOMIC DEVELOPMENT  
IN  
WASHINGTON STATE'S  
APPAREL AND TEXTILE BUSINESS

By

DEBORAH ANN VANDERMAR

A thesis submitted in partial fulfillment of  
the requirements for the degree of

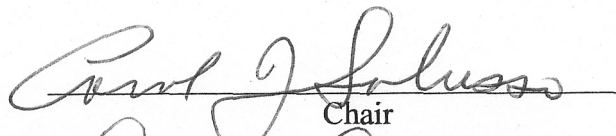
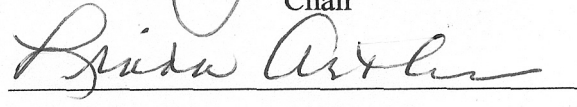
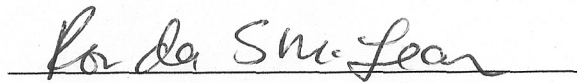
MASTER OF ARTS IN APPAREL,  
MERCHANDISING  
AND TEXTILES

WASHINGTON STATE UNIVERSITY  
Department of Apparel, Merchandising and Textiles

MAY 2007

To the Faculty of Washington State University:

The members of the Committee appointed to examine the thesis of  
DEBORAH ANN VANDERMAR find it satisfactory and recommend that it be accepted

  
Chair  
  


## ACKNOWLEDGEMENTS

I am grateful to librarians and archivists who guided me to documents from apparel and textile education in Washington's past: John Bolcer and the Special Collections staff in at the University of Washington, Tamara Belts, Gail Kleer and Ruth Steel at Western Washington University, and Charles V. Mutschler at Eastern Washington University.

Contemporary apparel and textile educators who shared their own stories included Catherine Townsend about Pierce College, Caroline Blount about Shoreline Community College, Rickie Bourgaize about Bates Technical College, Vivian Chesterley and Rosalie King about Western Washington University, Connie Davolt and Jill Price-Crowley about SeaTac Occupational Skills Center, Rose Dennis about Edmonds Community College, Marjorie Leidy about the Art Institute of Seattle, Hisako Nakaya and Camila Sigelman about Seattle Central Community College, Louise Prugh about Eastern Washington University, Meg Ryan about Highline Community College, Carolyn Schactler and Vicki Schaffer-White about Central Washington University, Stella Warnick about Seattle Pacific University and Carol Salusso about Washington State University.

Curators and librarians who located historical resources about the apparel and textile business included Ethylanne Larrimore at the Seattle Public Library, Mary Montgomery at the Museum of History and Industry and Ed Nolan and Joy Werlink at the Washington State Historical Society.

Apparel and textile business leaders, designers, technicians and innovators who were willing to discuss their businesses included: Rick Hemmerling and Joe Boldan about Ex Officio and the outdoor industry, Ammi Borenstein and Audrey Hicks about

Outdoor Research ®, Gail Cottle and Dean Holly about Nordstrom Product Group, Carol Goff about Recreational Equipment Incorporated ® and Trager ®, Evie Huntington about Eddie Bauer ®, Paul Jamison about Down Products, Winnie Jones about Roffe, Steve Miska about Brittainia and Generra, David Edelstein about the many companies he has promoted including Tommy Bahama, Larry Mounger about Pacific Trails and the promotional products industry, Raj Shah about Shah Safari, and Chami Joe Roe and Ute Foliart about factory conditions. Donna Schmidt's invaluable report to the Canadian Consulate, *Pacific Northwest Consumer Goods Marketing Guide for the States of Washington, Idaho, Oregon and Alaska*, provided a comprehensive overview of the apparel and textile business in 1994 with extensive lists of contacts.

Leaders of local designer groups who provided me with information included: Joyce Bowlby about Design Services Network, Willow Da Naan about Seattle Fashion Industry Group, Gabriel Choy about Seattle International Fashion Week, Melody Biringer about Crave Parties, Karen Seymour about Seattle Textile Computer Users Group and Suzanne Briggs about the Northwest Sewn Products Association.

For an overview of Washington's Skills Standards projects, Terryll Bailey of the Allison Group, Alan Hardcastle of Washington State University, Sally Zigler Hanson and Jim Crabbe the State Board for Community and Technical Colleges took care to explain the complex interrelationship between state agencies. Specific project information was provided by JoAnn Baria and Sally Templeton about the Marketing Skills Standard and Kathryn Mannes of the National Retail Federation and Tony Ogilvie of Seattle Central Community College about the Retail Skills Center.

Teresa Lemmons of the Metropolitan Development Council deserves special thanks for detailed explanations of incubators and state and federal agencies. I am grateful to Victor Vasquez, Director of the Economic Development Division, and Ginger Rich of the Department of Community, Trade and Economic Development of the State of Washington for our face-to-face discussion about the possibility of a fashion incubator in Washington.

Thanks go to Stella Farina of Portland, Mary Symons of Toronto, Lily Stametz of San Francisco and Susan Wilson of the Garment Industry Development Corporation in New York for discussing their incubator projects with me and to Margaret Hayes of Fashion Group International for her interest in Seattle as an incubator site.

I am grateful to the faculty at Washington State University and especially to my Committee for their knowledge and encouragement. Rhonda McLean graciously shared perspective gained from creating bridges between business and education. Dr. Linda Arthur offered clarity and insight. Dr. Carol Salusso, my Committee Chair and Advisor, never tired of providing positive suggestions and inspiration.

Lots of thanks and hugs to my daughters, Maggie and Josie, who got to see their mom do homework, too, and deep gratitude to my husband, Robert Poor, for his endless curiosity and sustained patience.

MISSED OPPORTUNITIES FOR  
CLUSTER BASED ECONOMIC DEVELOPMENT  
IN  
WASHINGTON STATE'S  
APPAREL AND TEXTILE BUSINESS  
ABSTRACT

By Deborah Ann Vandermar, M.A.  
Washington State University  
May 2007

Chair: Carol J. Salusso

Since the late 1990s, economic development agencies in postindustrial economies sought to improve their competitive advantage in world markets by applying the principles of Cluster Based Economic Development (CBED). They established projects to strengthen relationships among public agencies, nonprofits, trade associations, unions, investors, universities and research institutions. CBED projects in apparel and textiles included fashion incubators, research laboratories, training for new technologies, skills certification and export programs. Washington State embraced CBED and established projects for key industries, such as electronics and aeronautics, through the community college system. The apparel and textiles business might also benefit if the State were to encourage stakeholders to work together on CBED projects. There have been times when

groups of stakeholders in the apparel and textiles business have formed associations to resolve specific issues or gain advantage in specific markets. The only sustained period of broad based collaboration was during the almost one hundred years when the University of Washington's Textile Sciences department received funding and directives from the state and worked closely with industry to train professionals and technicians. Since that program closed in the 1980s, individual apparel and textiles programs and business associations have attempted to continue the legacy of industry/education collaboration and might offer a starting point for CBED projects if Washington were to recognize apparel and textiles as a cluster and dedicate resources to it again.

## TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS.....	iii
ABSTRACT.....	vi
THESIS	
1) INTRODUCTION.....	1
2) REVIEW OF LITERATURE.....	1
3) METHODOLOGY.....	11
4) RESULTS.....	13
5) ANALYSIS.....	46
6) CONCLUSION.....	48
REFERENCES.....	49
APPENDIX.....	60
APPENDIX REFERENCES.....	67



## **Dedication**

To the memory of my dad, Bert C. Vandermar, who shared his love of education and a passion for industry, and to my mom, Doris E. Small, who inspires me to find beauty and order in all things

## INTRODUCTION

Since the late 1990s, economic development agencies in postindustrial economies applied Cluster-Based Economic Development (CBED) theory to create public policy. The goal of CBED was to revitalize aging industries and improve their competitive advantage through strengthening relationships among manufacturers, retailers, labor interests, government agencies, non-profit organizations, investors and research and educational institutions.

Some regions with existing apparel and textile industries developed CBED projects such as fashion incubators. Incubators provided affordable studio and retail space, shared capital equipment, skill and technology training, media exposure, fashion shows and *pro bono* business and legal advice. Other regions established skills development programs and skills training centers, export programs, and research laboratories.

Washington State embraced CBED by establishing incubators, certification programs, Skills Standards projects and laboratories in key industries such as electronics, biomedicine and aeronautics. However, during the period of this research, 2003-2006, no CBED initiatives were being pursued for the textile and apparel industry in Washington State.

## REVIEW OF LITERATURE

### Cluster Based Economic Development

In 1979, Sony Electronics Inc., launched the Walkman ® in the United States, capping years of Japanese encroachment on American domestic electronics industry (Kikkawa, 2005). In 1984 Toyota ® built its first automotive production plant in the

United States, and in 1985 Toyota's export sales of motor vehicles exceeded 20 million (Toyota Company, 2006). It is no coincidence that in the same year, 1985, President Ronald Reagan commissioned a consortium of business leaders, academics, government officials and labor leaders to study the global competitiveness of the United States (President's Commission on Industrial Competitiveness, 1985). Michael E. Porter, a professor at Harvard Business School, and an advisor to leading companies worldwide, served on the Commission on Industrial Competitiveness. While serving on the Commission he recognized that existing methodologies for analyzing competitiveness at a national level were inadequate. Building on his prior research into the success of private businesses and industries, he formulated a method of understanding how some countries or regions become leaders in particular industries. His research into the most successful industries in ten countries, presented in *The Competitive Advantage of Nations*, identified four "determinants" of successful clusters.

1. Factor Conditions: skill levels and infrastructure
2. Demand Conditions: character of the local market
3. Related and Supporting Industries: character of the supply chain and similar businesses
4. Firm strategy, structure and rivalry: local cultural norms of organization, management and competition

Porter's analysis showed that no single determinant accounted for the success of an industry. He concluded that the interrelationship of all four determinants created a dynamic context in which companies can emerge and thrive (Porter, 1990).

Porter asserted that industries were successful and sustainable in a global setting not solely because of national economic power or policy, but because they relied on networks of relationships among stakeholders within a region. Porter dubbed these networks “clusters”. He suggested that successful post-industrial economies could maintain or regain their competitive advantage by recognizing, and nurturing these economic clusters (Porter, 1990).

### CBED in Apparel and Textiles

Porter’s conclusions sparked an international dialogue and shifted consciousness about public policy in many regions. Postindustrial economies outside of the United States began to rebuild or create apparel and textile clusters beginning in the 1980s. With crucial public aid, consortiums of businesses, schools and artists built and sustained incubators and research facilities to stimulate creativity and business.

### *CBED in Apparel and Textiles in Canada*

The Toronto Fashion Incubator (TFI) was the best known CBED project in fashion and apparel. When TFI opened in 1987, the apparel industry was Toronto’s second largest industrial employer. The city’s Economic Development Division promoted the founding of a voluntary consortium of local businesses and non-profits called The Fashion Industry Liaison Committee (FILC). Seed funding came from the city and the federal government, but the incubator itself raised money through rental of space and equipment, consulting, corporate sponsorship, fund raisers and workshops. The incubator served the small business community by providing consulting, training,

space and visibility and market access to new designers. Larger business donors gained visibility through sponsoring competitions, fashion shows and events (Toronto Fashion Incubator, 2006). The success of the Toronto Fashion Incubator was measured in longevity, the success of the designers who have launched successful careers, and visibility in the fashion community. Unfortunately, the apparel business in Toronto and Canada in general declined in the mid-2000s due to rising competition from foreign imports (Stratigis Industry Canada, 2006).

#### *CBED in Apparel and Textiles in England*

In 2001 London Development Agency (LDA) funded a series of projects collectively called London Fashion Forum (LFF). When the funding ended in 2006, LFF participants formed a group called Fashion-Enter whose activities included a wholesale operation to supply services for small designers and a website with news, links and a directory (Holloway, 2006). The LDA continued to provide studio space, high capital equipment and business and technical training at the London Apparel Resource Center (LARC) (London Development Agency, 2006).

#### *CBED in Apparel and Textiles in Australia and New Zealand*

The Melbourne Design and Fashion Incubator (MDFI) was established in 2001 by the Melbourne Development Board, an agency of the national government. MDFI was housed in a modern commercial tower in the heart of Melbourne's retail core. It provided business mentoring and exposure through events and fashion shows for new designers (Melbourne Development Board, 2006). In the greater Wellington, New Zealand, area,

three city development entities set up a trust called Positively Wellington Business to implement “a regional strategy to ensure that resources support the strengths of the region without duplication between agencies or cities” (Positively Wellington Business, 2006a). One of their efforts, Fashion HQ (Headquarters) provided fashion design start-up businesses by affordable space, rigorous review of business plans and business mentoring (Positively Wellington Business, 2006b). The Dunedin Fashion Incubator in New Zealand was involved national and local government agencies and the local university. DFI supplied space, exposure, equipment and business advice in a seaside town known for art and culture tourism (Dunedin Fashion Incubator, 2006).

#### CBED in the United States

Cluster Based Economic Development (CBED) became a major theoretical model for public policy in the 1990s in the United States. CBED was a good fit for the Economic Development Agency (EDA). The EDA published its guidelines, “Cluster Based Economic Development: A Key to Regional Competitiveness” in 1997 (Economic Development Administration, 1997). This branch of the Commerce Department had been formed in 1965 during President Lyndon B. Johnson’s War on Poverty. The EDA was designed to provide resources to economically distressed parts of the country that were experiencing high unemployment and low income in the richest nation on earth at a time of unparalleled prosperity. The EDA was also meant to address issues of social injustice and inequality by building access to economic success (Economic Development Administration, 2006a).

By the 1980s economically distressed areas in the United States were found not only in the inner core of cities and in small, rural towns but increasingly in previously prosperous areas that had once centers of trade and industry. These areas were being devastated by the shuttering of factories that failed to meet global competition, the shrinking of military bases due to peace time cuts in military spending, and the closing of mills and mines following natural disasters and depleted natural resources. New policy was needed to address unemployment, low capital, and poor education in areas that had not suffered from these issues in the past. The EDA embraced CBED policy because it laid out a strategy for building on existing infrastructure and institutions to strengthen failing industries or build new ones (Economic Development Administration, 1997).

When applicants approached the EDA for grants to conduct research, to begin economic or trade adjustment projects, or to supply technical assistance or planning advice, they had to provide evidence that their cluster had the potential to survive and prosper (Economic Development Administration, 2006b). Applicants were required to articulate clear, achievable goals, to utilize transparent structures and accounting, and to demonstrate strong local commitment to diversification, innovation and collaboration among stakeholders (Economic Development Administration, 2004b). The EDA emphasized that the success of a cluster depended on the “collaborative advantage”:  
“...strong civic leadership, collaboration among organizations, across sectors and across communities in the region...” (Economic Development Administration, 1997).

As industries continued to falter in the United States in the 1990s and into the early 2000s, individual states were eager to implement federally funded CBED projects. By the time Congress reauthorized the EDA in 2004, over 300 million dollars were being

funneled to states annually for CBED projects including incubators, Skills Standards projects and certification programs.

### CBED in Apparel and Textiles in the United States

Some centers of apparel or textile production in the United States developed CBED projects such as incubators, laboratories and training centers in order to address declining markets and production. They taught skills in new technologies and business practices, nurtured local designers or entrepreneurs, or renovated derelict neighborhoods. Projects were organized by labor or manufacturers organizations, government agencies or by real estate developers. Funding was supplied by federal, state or local grants, unions, businesses or educational institutions or fundraising events. All of these CBED projects were built on a process of inclusion and cooperation among stakeholders.

### *CEBD in Apparel and Textiles in North Carolina*

The earliest and farthest reaching CBED project in the United States was [TC]<sup>2</sup>® (Tailored Clothing Technology Corporation). When [TC]<sup>2</sup> was established in the 1980s, its location, Cary, North Carolina, was in the heart of the American textile industry. [TC]<sup>2</sup>-United States National Apparel/Sewn Products Technology Center was built by the United States Department of Commerce (DOC) and thirteen sewn products companies. Its purpose was to demonstrate new clothing production systems and technology to the apparel industry. [TC]<sup>2</sup> grew out of a 1979 Harvard University study by Frederick H. Abernathy and John T. Dunlop, funded by the National Science Foundation, which found that the apparel industry in the United States needed to focus on new technologies and



systems in order to compete in a global marketplace. In the 1980s and 1990s [TC] <sup>2</sup> became an important source of development, testing and training in robotics and modular manufacturing. Using body scanning technology [TC] <sup>2</sup> conducted a nation wide survey of body shape and size. Soon after the report called *Size USA* was published in 2004, the fit of ready-to-wear changed products to reflect its findings in companies such as Jockey, JCPenny ([TC] <sup>2</sup>, 2005a) and Victoria's Secret ([TC] <sup>2</sup>, 2006). Membership, contributors to [TC] <sup>2</sup> and partners in research expanded to include universities, colleges and major apparel and textile businesses ([TC] <sup>2</sup>, 2005b).

#### *CEBD in Apparel and Textiles in New York*

Garment Industry Development Corporation (GIDC) was instituted in 1984 by the International Ladies Garment Workers Union (ILGWU) with federal, state and city funding to preserve jobs in New York City's garment industry. The ILGWU was joined by educators, the city, garment industry associations, retailers, wholesalers, factory owners, and neighborhood associations. The GIDC provided training for workers and management, guidance on technology updates in factories, and mentoring for designers in how to export their products. The GIDC has proved to be resilient over time, surviving funding cuts, location changes and even the decimation of the factory base in lower Manhattan following September 11, 2001 (Garment Industry Development Corporation, 2004).

#### *CBED in Apparel and Textiles in Illinois*

In Chicago from the 1980s to the 2000s several CBED projects addressed the decline of the coat and suit industry. The Apparel Industry Board, Inc., was organized by

Mayor H. Washington in 1987, held an annual fall fashion show to promote local designers called Red Hot (Apparel Industry Board, 2005) which expanded into Fashion Week in 2006 (Bowman, 2006). The Chicago Manufacturing Center, a state funded entity, provided patternmaking services and consulting for small manufacturers in 2000 (Prism Business Media Inc., 2000). The Chicagoland Entrepreneurial Center hosted “Stitches”, a mentoring program for rising apparel entrepreneurs in the mid-2000s (Dimet, 2006). In the 2000s groups of independent designers such as Chicago Fashion Launch and Chicago Fashion Foundation hosted fashion shows and opened inexpensive space for new designers (Bertagnoli, 2003). Macy’s announced that it would be following up its 2006 showcase of local designers by dedicating permanent space in the icon Marshal Field’s to create a fashion incubator like the one in Toronto in partnership with the city (Jones, 2006).

#### *CBED in Apparel and Textiles in Texas*

Dallas Fashion Incubator (DFI) opened in 2004 in a newly restored Sears building in Dallas with funding from JCPenny and other retailers and retail associations. The mission of DFI was to assist new and existing designers by supplying business advice and contacts with suppliers and manufacturers and to promoting social integration and revitalization in the neighborhood surrounding DFI (Dallas Fashion Incubator, 2006).

#### *CBED in Apparel and Textiles in California*

Los Angeles Fashion Business, Inc. (FBI) was started in 1998 by Francis Harder, designer, international businesswoman, author and teacher. Harder’s visionary leadership

brought together stakeholders in an industry that had declined far less than it had in New York or Chicago from the 1980s into the 2000s. FBI members included retailers, manufacturers, educational foundations, economic development agencies, local politicians, banks, media outlets, apparel technology companies, accounting firms, labor organizations, and property developers (Fashion Business Incorporated, 2006a). FBI grew through the 1990s and 2000s until it secured office and classroom space in the NewMart apparel market center, where it provided extensive, accessible help for new fashion entrepreneurs (Fashion Business Incorporated, 2006b).

#### *CBED in Apparel and Textiles in Oregon*

When California designer Stella Farina came to Portland she recognized the potential of a collaborative fashion project similar to FBI and TFI. When she started the PDX Fashion Incubator in 2002, it provided low cost technical training, retail space, fashion shows (Fashion Week) and a fashion community web site (Springer, 2005). Although PDX brought awareness and visibility to the fashion community in a city that was known for active sportswear, not fashion, Farina was unable to win the kind of public funding and corporate sponsorship that FBI had and PDX closed in 2005 (Radon, 2005). Ironically, just as PDX was closing, Oregon recognized “apparel and sporting goods” as an economic cluster (Oregon Business Council, 2005).

#### *CBED in Apparel and Textiles in Washington State*

While other regions were establishing CBED projects to cultivate their apparel and textile business, Washington State did not; even though the state began implementing

cluster based economic policy in other business sectors in the late 1990s. In 2001, when Paul Sommers of the University of Washington recommended four clusters worthy of funding, he included wood products, health care, biotech, and electronics but did not mention apparel and textiles (Sommers, 2001). In 2004, when Washington received 11 million dollars in grants from the EDA for CBED, over half of the money was used to fund public works (Economic Development Administration, 2004a). A matching grant for over three million dollars to provide loans for innovative start-up businesses in electronic and bio-technology, defense and the environment did not include apparel and textiles (Sirti, 2006). In 2006 five clusters including wine, aerospace, environment and marine won grants totaling over \$335,000, but not apparel and textiles (Washington State Department of Community Trade & Economic Development, 2006).

## METHODOLOGY

### Research Question

If leaders in Washington had considered recognizing and investing in apparel and textiles as an economic cluster, would they have found relationships in that industry ready to sustain Cluster Based Economic Development (CBED) projects?

### Purpose

The purpose of this research was to describe relationships among stakeholders within and surrounding the apparel and textile business in Washington State during the years of its development. These relationships were compared to other regions that have

organized CBED projects in order to identify which stakeholders in Washington might participate in CBED projects in the future.

### Scope

In the first stages of the process of establishing CBED projects, the Economic Development Agency (EDA) recommended assessing the level of stakeholder interest by creating participatory events (Economic Development Administration, 1997). Applying this recommendation to the apparel and textile industry in Washington required identifying constituencies, a process that proved to be challenging. Unlike regions where CBED projects had already been established, the apparel and textile business in Washington lacked visibility and identity.

Washington did not have a city or district within a city recognized as a “garment district” like New York’s Seventh Avenue. It did not have a daily publication such as *Women’s Wear Daily* with fashion business news, advertisements and job listings. The state was not identified with the production of raw textile fiber like cotton. Yet, the fact that well known national apparel brands like Eddie Bauer®, Nordstrom, and Union Bay were associated with Washington and that acclaimed designers such as Luly Yang had their studios in the state suggested that there was indeed economic activity in textiles and apparel. Because the stakeholders in the textile, apparel or fashion industry were not as easily identified as in other regions, the industry merited a descriptive study to understand who the stakeholders were and how they were associated with each other.

Sources for information in this study included news media, websites, interviews, videos and archival material from libraries, museums and universities. When the

information about a company was taken from a website, at least one other source was sought from news media or interviews. Because some of the companies explored were established when Washington was becoming a state, research began with the 1870s. Because this study focused on relationships among stakeholders who traded not only in apparel but also in textile products and services, the research included sewn products such as back packs and tents. Other “fashion” items such as jewelry that are not sewn products are not included.

## RESULTS

### Collaboration and Conflict: Apparel and Textile Business in Washington

#### *Slow Growth of Industry: Competition from the East Coast*

Industrial development was slow to take hold in the early days of western expansion into Washington. In the 1870s when pioneer Ezra Meeker was asked by the Library of Congress to study Washington Territory and write a survey, he recognized the great potential of unlimited energy and resources and lamented that industrial growth had not yet followed. He noted that raw materials like tanned hides and wool were being exported to cities outside of Washington to be turned into shoes and clothes that in turn were re-imported. He hoped that the one woolen mill in Steilacoom would be followed by others (Meeker, 1870).

Fifty years later in his book *Washington: Seventy Years of Progress*, Meeker expressed his frustration. As a successful inventor, politician and entrepreneur himself, he could not understand the continued reluctance of industrialists to exploit Washington’s vast potential. He expected that with the arrival of the cross-country railroad and the

growth of Seattle into an international port that Washington would export its abundant resources to markets in Asia and cities in the eastern United States in the form of finished goods. Instead the railroad and port were accelerating the exportation of raw materials to other cities and the re-importation of finished goods from elsewhere (Meeker, 1921).

The timing of the arrival of the railroad could not have been worse for the development of an industrialized apparel and textile industry in Washington because it brought manufactured goods from the factories in the East. Retailers found that products loomed and sewn in the eastern United States were cheaper, of better quality and more readily available with easier terms than those produced in Washington. Local factories were relegated to “fill in” orders with small quantities and quick delivery times. Even with the increase in population brought by the completion of the transcontinental railroad in the late 1880s, markets were too small to generate orders big enough for factories to become efficient and able to compete with goods from the East Coast (Anderson, 1937).

#### *Growth from Innovation: New Companies*

Eastern factories could not supply the kind of tough gear needed to tame and exploit the resources of the West found in rugged mountain, dense forests and icy coastlines. Companies such as C.C. Filson ® started by providing clothing with water repellency, advantageous thermal properties and abrasion resistance for lumberjacks in the early 1890s and then “struck it rich” by outfitting miners when they embarked from Seattle for the Yukon Gold Rush of 1887 (C.C. Filson Co., 2006). Seattle Quilting invented down sleeping bags for workers on the Alaska Railroad from 1915 to 1923

(Seattle Outerwear "Down Filled" Capital, 1970). The Appendix provides a review of additional companies that developed products uniquely suited to the Northwest.

Even though some innovative products developed in Washington became popular enough to gain national distribution, the manufacturing base remained relatively stable until the post-WWII period. A review of the *Manufacturers Directory* of 1920 lists approximately 30 textile and apparel manufacturers in Washington across all categories by gender, age and use including ladies', men's, children's, outerwear, suits, shirts and accessories. Subsequent editions of the same directory from the 1920s and 1930s show slight increases and decreases in the number and character of manufacturers listed (Manufacturers Association of Washington, 1923; 1926; 1931; 1937).

#### *Collaboration among Workers*

During the 1920s and 1930s, apparel manufacturers and garment workers formed organizations on opposite sides of issues regarding wages, hours and conditions. They did not have a common vision for building an industry that could meet all of their needs. Workers organized unions as early as 1889 when Seattle Local No. 71 of the Tailors' Union was organized to represent tailors who worked in factories (Lange, 1999). Local 17 of the United Garment Workers of America (UGWA) was formed on January 26, 1903. The UGWA represented workers in menswear factories such as Black Manufacturing, C.C. Filson Co., Eddie Bauer®, and Item House (de Catanzaro & Janacek, 2002).



### *Collaboration among Manufacturers*

Washington apparel manufacturers joined together specifically to deal with labor issues. When women in dress factories attempted to join the ILGWU in the 1920s, factory owners stood firm against collective bargaining. In *Bread upon the Water* Rosa Pesotta describes the Committee of 500 from the Seattle Chamber of Commerce which was successful in resisting unionization after seeking advice from the National Cotton Dress Manufacturers' Association in New York. In 1934, however, under the authority of the National Recovery Act, union organizers were finally shored up during strikes and succeeded in signing up enough workers to win ILGU representation (Pesotta, 1944).

### *Growth after WWII*

Between 1941 and 1945, Seattle's population had already swelled from 360,000 to 480,000 as family life developed around military bases (Ochsner, 1994). People from other parts of the country that had not completely recovered from the Depression and the Dust Bowl migrated to the area. "Caravans to the Northwest" (Payton, 2000) developed as people came to find work in ship yards and the Boeing ® Company (Riddle, 2006). The Interstate Highway System facilitated this migration in the 1950s (TRIP, 2006). People were attracted by the publicity generated by the Seattle World's Fair in 1962, which helped form an impression of the region as progressive and prosperous. Washington was not immune to the Baby Boom. Seattle grew approximately 100,000 from 1950 to 1960. King County population nearly doubled from 1940 to 1960 (Ochsner, 1994).

In response to the rise in population and growing consumerism across the United States, existing apparel manufacturers expanded. The down jacket business that had been started by Eddie Bauer before World War II (WWII) began to flourish (State of Washington Employment Security Department, 1953). Army surplus sleeping bags left over from WWII were turned into jackets that grew in popularity in the postwar era, making Seattle the center of down products for the United States (Seattle Outerwear "Down Filled" Capital, 1970).

### *Growth from Innovation: Skiwear and Outdoor Gear*

Interest in leisure activities and the increase in disposable income after WWII sparked the establishment of new businesses in Washington. Skiing became very fashionable as a result of media exposure from the first televised Winter Olympics in 1960 at Lake Tahoe with opening ceremonies were directed by Walt Disney (Blue Sky Communications, 2003). Sam Roffe, a Seattle tailor who had already been manufacturing ski wear for REI and other companies (Skoog, 2002), designed uniforms for the United States ski team. Roffe was thrust into the national spotlight and sales boomed (Mulady, 2001). Modest growth in Washington apparel industry at this time was due to the growth in the ski and outdoor industry (Skutt, 1966). The Appendix provides lists of more companies that specialized in snow sports and outdoor activities. Despite the growth, outdoor gear manufacturers and retailers did not form an organization until two decades later.

### *Collaboration among Wholesale Representatives*

In the post-WWII era, in the midst of rising population, growing consumerism, and the proliferation of retail stores, a new group emerged. Sales representatives of wholesale lines from all over the United States organized the Pacific Northwest Apparel Association (PNAA) in the 1940s. Their purpose was to create seasonal trade shows called Market Week where local retailers could buy products from the lines from national and local manufacturers and wholesalers without having to travel to New York or Los Angeles (Pacific Northwest Apparel Association, 2005). The PNAA did not find a permanent location to house Market Week and members' showrooms for over 30 years.

### *Continuing Conflict between Workers and Owners*

In post-WWII period, unions continued to represent workers in older more established companies and they won contracts with new businesses like Roffe and Pacific Trail (de Catanzaro & Janacek, 2002). In the same period, however, manufacturers did not band together to fight union demands as they had decades earlier. Like factories in the east, some Washington manufacturers evaded confrontation with unions by moving to areas where union activity was less organized than in the major cities. Within ten years after its founding in 1946 Pacific Trail had become the largest manufacturer of high quality men's and boys' rainwear in the United States (Sportswear firm expands, 1956). A ready labor supply was needed to sustain its growth, but perhaps the owners were alluding to union wage and benefit demands rather than population issues when they said they could not find "enough workers with the right skills at the right wages" to produce their orders (Small labor pool is a problem to garment industry in Seattle, 1956). Pacific

Trail's decision to build factories outside of Seattle (Pacific Trail to open Spokane Plant, 1966; Pacific Trail to open factory in Wenatchee, 1971), may have been prompted not only by a need for more workers, but also by conflicts with the AGWU (Seattle apparel firm plans \$250,000 plant in Olympia, 1953). The migration of factories from the coastal city centers did not contribute to a cohesive, recognizable presence of the apparel and textile business in Washington.

### *Exponential Growth from Innovation: Britannia*

By the 1970s the popularity of winter sports and the 1962 Seattle World's Fair had brought the active and prosperous Northwest lifestyle to national consciousness. New brands appearing in the mid-1970s capitalized on this image and catapulted Washington into the national spotlight as a leader of fashion trends. For a 15-year period, Seattle was a mecca for sportswear buyers (especially for menswear) from around the country who were looking for the latest jeans, shirts and knitwear.

The fashion boom started with the jean craze of the early 1970s when Richard R. (Dick) Lentz showed a distressed, decorated jean he found in Europe to an Asian sewing contractor. Britannia Sportswear flourished due to the happy coincidence of inexpensive offshore labor, creative Asian design skill, protected natural ports and an American population hungry for casual fashion (Brown, 1987). As Britannia became the leading brand of jeans in the United States, it introduced not only a fashion trend but also forged a new way of producing apparel: outsourcing. In its early days most of Britannia's product was made in Hong Kong and later in China (Vandermar & Warnick, 2006).

After Britannia was sold to Levis in 1979, its executives opened other sportswear companies whose success was also based on offering inexpensive, trend driven apparel produced in Asia. Dick Lenz started Seattle Pacific Industries with its brand Unionbay®. Steve Miska started Generra ® with Tony Margolis and Dan Prentice (Brown, 1987). Others were to follow: Code Bleu, Shah Safari ®, and Bench Co. Ltd. (Smarr, 1988b), Re Union ®, Heet, Breezin' ®, Sync, Ary Cooper, International News ®, M'otto, LTD, Sloan, b.u.m. genuine gear by b.u.m. equipment ®: Wear Ib Earth, and Base Allusion (Spector, 1987).

#### *Collaboration among Wholesalers and Buyers: Preline*

Brittannians were not only creating new manufacturing and business models; they were pioneering new marketing strategies as well. In 1974, as Dick Lenz was preparing Britannia's product line for MAGIC, the men's wholesale market week in Los Angeles, he invited a group of buyers from major retail chains to Seattle. He asked the buyers to give their feedback in advance of MAGIC so that he could make last minute changes to design details, color, assortment, sizing and price. The buyers, who had never experienced such control over their own merchandise mix, asked to be invited back before every market week. "Preline" was launched and soon other Seattle based fashion companies were showing product lines to buyers in Seattle before MAGIC. At its height in the late 1980s, dozens of Seattle based wholesalers, most of them new companies, were booking \$600,000,000 in wholesale business at Preline (Spector, 1987).

### *Collaboration among Retail Buyers and Wholesalers: The Trade Center*

The expansion and excitement of the fashion business in the 1970s and 1980s was captured by Stella Warnick in her film *Seattle Styles* (Phillips, 1985). Not only were wholesale apparel representatives from outside of Washington coming to Seattle for Preline, but the new fashion companies in Seattle were adding sales representatives of their own. When a group of Canadian investors recognized the growing demand for wholesale show rooms and opened the Trade Center on Elliot Street in Seattle in 1976, the building became the first in Washington to be associated exclusively with the apparel industry (Nabbefeld, 1998). The PNAA, the group of wholesale sales representatives organized in the 1940s, took on the administration of the new Trade Center (Biz Trade Shows, 2005). In 1985, the Art Institute of Seattle with its Fashion Design Program moved into the same building (Art Institute of Seattle, 2006), making it a center of creativity and commerce in fashion and apparel. If there had been a CBED initiative to establish a fashion incubator or other CBED in 1985, the Trade Center would have provided a great starting point.

### *Growth from Innovation: New Product Categories*

The legacy of the fashion boom of the 1970s and 1980s was the creation of fashion driven men's casual sportswear business that was distinct from the outdoor business. Offshore production was able to provide far more capacity than local factories could. By the early 1990's 75% of all men's sport shirts were designed by Seattle area firms and revenues from men's casual sportswear reached approximately \$1 billion

annually. Seattle based Shah Safari alone was responsible for planning and producing 25% of the sport shirts sold in the United States (Vandermar & Warnick, 2006).

As Britannia, Generra and the others were making a name for Seattle as a fashion leader in the 1970s and 1980s, local companies that had opened decades earlier as outdoor gear companies jumped on the fashion bandwagon and expanded their textile based product lines for the general consumer market. When Eddie Bauer started to shift its emphasis from outdoor sports gear to casual dress that could be worn on the weekend and to the office on “Casual Friday”, it became a leading national brand of casual sportswear for men and women (Eddie Bauer, 2006). When JanSport®, makers of framed technical packs and tents, started to make colorful, simple packs for students in 1976, the company set its course to becoming largest vendor of daypacks and book bags for in the world (JanSport, 2006). Their success was a mixed blessing for the apparel and textile business in the region. The visibility they brought with the international distribution of their brands was off-set by the erosion of the factory base (Phillips, 1985). JanSport and Eddie Bauer factories in Washington were closed in the 1990s.

#### *Growth from Innovation: Private Label*

Manufacturers were not the only companies to benefit from sourcing apparel and textile products from offshore suppliers. Nordstrom, the Seattle based retailer, started buying sweater knits from Hong Kong and Israel to sell under Nordstrom house labels in the early 1970s (Beers, 1996). Nordstrom private label business, sourced primarily in Asia and Europe, was so successful that the early 1980s Nordstrom Own Product (NOP)

became an independent business unit, Nordstrom Product Group (G. Cottle, personal communication, October 20, 2004).

*Collaboration among Manufacturers: Lobbying against Quota*

As increasing numbers of apparel companies sourced their products offshore, pressure mounted in the United States Congress to pass protectionist legislation to slow imports and reduce competition from abroad. Ex-Brittanians whose new businesses and jobs relied on out-sourcing formed the National Apparel and Textile Association (NATA) in 1985 to lobby against quotas on apparel imports (Chasan, 1990; Spector, 1985). The focus of the NATA was narrowly defined to create a favorable trade environment for apparel wholesalers and retailers without regard for the economic impact of imports on the region as a whole. In the early 1990s when NATA achieved its goal and the World Trade Organization eliminated quota in textiles, the group disbanded (Gwinn & Skidmore, 1994).

Some Ex-Brittanians maintained social contact and friendships (Hofman, 2001) but did not create a formal association again after NATA. In the 1990s the ownership of their companies slipped into hands outside of Washington. Levis had already purchased Britannia in 1979 and moved it to San Francisco; but when VF Corporation bought the brand in 1994 and moved Britannia back to Seattle, it closed within in a few years. After Generra failed to deliver its innovative Hypercolor clothing in 1990 and filed for bankruptcy (Prinzing, 1992) it continued only as a licensed brand with offices in New York. Union Bay's ownership changed to a group of Asian shareholders. Later, in 2003, Tommy Bahama, was purchased by a bigger company from the eastern United States



(Oxford Industries, 2003). Other local companies such as Eddie Bauer had a series of owners from outside of Washington from the 1970s through 1990s (Eddie Bauer, 2006). Pacific Trails was purchased by London Fog in 1994 (Mulady, 2001) and by Columbia Sportswear in Oregon in 2006 (Columbia Sportswear Buys Pacific Trail/Moonstone, 2006). The common history and experience that allowed Ex-Britannians and others to act in harmony with each other when they formed NATA was lost through mergers and acquisition.

### *Decline: The End of Preline*

It would be hard to imagine the kind of unified efforts of the 1980s repeated today. The economic recession that followed the stock market crash of 1989 reduced consumer spending and retailers were no longer willing to spend money to send buyers to both Preline and MAGIC (Nelson, 1991). When Preline ended in 1992, so did Seattle's status as a fashion capital (Nogaki, 1992). When the number of small retail apparel stores in Washington started to decline in the 1990s so did the number of wholesale sales representatives in the Trade Center which finally closed in 1999. MAGIC, even though it was outside of Washington, continued to provide the major trade show and connection for retailers and wholesalers (Men's Apparel Guild in California, 2006), but locally the PNAA continued to hold Seattle Trend Show at various locations (Pacific Northwest Apparel Association, 2005).

### *Growth from Innovation: Outdoor Gear*

Some outdoor gear companies including Recreational Equipment Incorporated ® (REI ®) and Outdoor Research ® (OR®) chose not to enter the fashion retail market in the 1970s and 1980s as Eddie Bauer had, but continued to intensify the technical aspects of their lines. New companies were started to serve the ever-growing demand for products designed to enhance performance or pleasure during specific outdoor activities, many of which were apparel or textile based. See the Appendix for a listing of companies whose founders were outdoor enthusiasts who could not find the perfect hat, gaiter, tent, heated vest, shoe or pack and had to make it themselves.

Some innovators invented whole new sports in their quest for adventure. Snow boarding required new equipment, including new kinds of clothing that the traditional skiwear companies were slow to understand and develop. K2 and other small companies led the way with developing snowboard technology and clothing design (K2 Sports, 2003). These companies were not only part of the outdoor industry, but also part of a new culture that was springing up among younger “boarders” who might skate board on cement, wake board on water and snow board on the slopes. Boarders sported clothing that set them apart from their parents and other groups of young people. Zumiez, a retailer that started in Northgate mall in Seattle in 1978 understood that culture and designed a chain of retail stores and a product development company around this new niche market (Zumiez, 2006).

### *Collaboration: Outdoor Industry Associations*

Unlike the casual sportswear business in Washington, the outdoor wholesale and retail business worked in a unified way as it continued to grow through the 1990s and 2000s. Companies that made and sold outdoor gear formed the Outdoor Industry Association (OIA) in 1989. OIA conducted industry research like demographic studies of consumers and professional education and published its findings in the magazine *Outdoor Retailer*. OIA lobbied in Washington D.C., and provided cost-saving benefits for its members. It advanced the main outdoor product tradeshow, *Outdoor Retailer*, for summer and winter markets (Outdoor Retailer, 2005). Outdoor sport niche industries formed trade associations such as the National Ski & Snowboard Retailers Association (National Ski & Snowboard Retailers Association, 2006) whose membership overlapped with OIA in some cases.

Although The Outdoor Retailer show and magazine were not produced exclusively for Washington, their forums provided an important source of information and identity for the outdoor business in the state. In 2005 when California had 152 members of OIA and Colorado had 131 Washington had 79 members of which about half made textile based products of some kind (Outdoor Industry Association, 2005).

### *Collaboration among Manufacturers*

For a brief time in the 1990s, an association of companies who were still involved in factory production in Washington formed a group, the Northwest Sewn Products Association (NSPA). As a project for her master's thesis Suzanne Briggs opened a store in Seattle in 1997 which provided an outlet for wholesalers and retailers

from all over the Northwest for selling off excess inventory. When her clients expressed a desire to look for other creative ways to share resources and find solutions for common problems, Briggs helped found the NSPA (S. Briggs, personal communication, 2005). The 145 members included a broad range of companies from the Northwest such as Nike, Columbia, REI and Moss Adams and a number of academic institutions such as Washington State University, the Art Institute of Portland and the University of Idaho, Moscow (Grbavac, 2001). Of the groups that formed throughout the years, the NSPA was the closest to a broad consortium of stakeholders that could have been the basis for CBED. Due to the negative impact of outsourcing in local factory production and the subsequent failure of many members' businesses, the organization lacked sufficient volunteer effort and it closed in the early 2000s.

### *Declining Conflict between Workers and Owners*

As local companies with existing factories started to look for factory production offshore in Asia and Central and South America, and demand for local factory labor decreased, union activism in the Pacific Northwest died. Eddie Bauer began to close or sell off its Washington factories in the 1980s (Phillips, 1985). Pacific Trail went from 100% domestic production in the 1970s to 95% offshore production by 1988 (Smarr, 1988a). Some union companies like Roffe resisted sourcing their work outside of the region. They felt that they could control the quality better and give better customer service (Phillips, 1985). As Asian factories grew in expertise and infrastructure, factories in the United States eventually could not compete with the quality. As manufacturers increasingly sourced production outside of the United States and

established factories like Roffe's closed (Szabo, 1996), needle trade unions merged with service unions and were no longer powerful in speaking for the few remaining sewing employees the state (UNITE HERE Local 8, 2005).

### *Conflict among New Immigrant Workers*

Unions were not able to gain a foothold in the small factories that were established in the Puget Sound region to handle overflow or fill in orders generated by the Britannia boom in the early 1970s. Because many of the workers were war refugees from various parts of Southeast Asia, factories sometimes hired supervisors from each ethnic group to deal with language and cultural differences (P. Jamison, personal communication, June 9, 2005). This practice, along with the hiring of inexperienced workers and payment by piece rate, fostered suspicion and competition, hardly an ideal environment for collective bargaining (Gee, 2001). Ironically, Seattle, a city known for the strength of its labor movement in the early part of the 20<sup>th</sup> Century, and host to the local chapters of several needle trade unions, was not a city where a union led the way to a CBED project as it had in New York.

### *Collaboration among Small Factory Owners*

A few factories in Washington managed to compete with off-shore competition by specializing in niche products or small quantity orders or fill-ins, much like the factories of the previous century. In the mid-2000s a group of these small factories, with the help of Teresa Lemmons from the Metropolitan Development Council, a non-profit agency in Tacoma, wrote a letter to the State Legislature in Olympia, requesting help

with retooling, retraining workers and attracting contracts. This letter did not result in any action by the state (C. Joe Roe, personal communication, March 24, 2004). Chami Joe Roe, one of the factory owners in the group, announced the closure of her factory in June of 2005 (C. Joe Roe, personal communication June 17, 2005).

Collaboration:  
Textile Based Art and Design Businesses

*Collaboration: Independent Fashion Designers*

From the 1980s and into the 2000s business and government leaders in Toronto, Melbourne, London, Chicago, Dallas and Los Angeles organized CBED projects to contribute to the success of start-up apparel and textile businesses. In Washington, without this kind of assistance, independent apparel and textile based businesses formed grass roots networks and entrepreneurial projects in the spirit of PDX Fashion Incubator of Portland. Design Services Network, organized by Joyce Bowlby, a patternmaker in the outdoor industry and community college instructor, held meetings with small apparel business owners and free lance technicians and designers for over twenty years (Bowlby, 2004). The Seattle Textile Computer Users Group was formed in 1989 by a group of textile artists who wanted to pool product knowledge and share information about using computers when design software was new and not user friendly (K. Seymour, personal communication, 2005). Willow Da Naan formed a networking group for new designers called Seattle Fashion Industry Group and hosted a weekly show on public access TV to showcase local fashion events and new designers (Da Naan, 2005). Jon Rosson's Arena Fashion Show spotlighted the most fashion forward designers from 1990-2004 (Bendetti, 2002). Gabriel Choi worked on creating a Seattle International Fashion Week in the

2000s (Choy, 2006). Joan Kelly of Fashion First held two annual fashion shows for local retailers and designers in 2005 and 2006 (Kelly, 2006).

Melody Biringer designed Crave parties to provide woman-owned start-up businesses that sold fashion clothing, accessories, cosmetics, services and home products with a place to reach their niche markets without having to invest in brick and mortar sales outlets. *Crave Seattle: an Urban Girls' Manifesto* (Beaulac & Biringer, 2004), profiles the businesses Biringer promoted. This flea market *cum* trade show format became so popular that it was franchised nationally. Although Biringer's "Crave gals" did not meet with each other in an organized way, they constituted an informal network of producers and loyal consumers (M. Biringer, personal communication, May 27, 2005).

#### *Collaboration: Arts and Crafts*

Fashion designers were not the only textile based artists and businesses in Washington who formed associations to market their products and share information. The Association of Pacific Northwest Quilters Guild (APNQ) was organized in 1992 to represent the interests of hundreds of stores and suppliers of quilting and sewing supplies and to organize exhibitions and classes (Association of Pacific Northwest Quilters, 2006). The Sewing and Stitchery Expo in Puyallup was established in 1984 by Washington State University Extension. SewExpo expanded from a one day event to three days in 1994 to accommodate the more than 30,000 crafts people and entrepreneurs who attended each year. Many had small custom businesses that made products sold on the internet, from the home, or at crafts fairs and bazaars (Washington State University Pierce County Extension, 2006).

The Northwest Crafts Alliance Corporation was established in 1989 by 30 artists to create an arts and crafts show that was to be financed and operated by the artists themselves. It was to be "artist friendly" with high quality art chosen through screening and jurying (Best Of The Fests: 1999 Best Of The Northwest, 1999). The "Best of the Northwest" (BNW) event was so successful that it expanded to Portland in 1995 and added a second show in Seattle in the spring of 1998. BNW has remained a highly regarded and well attended art show each year. Of the close to 150 participating artists as of May 2005, approximately one fourth worked with a textile medium, mostly in wearable art (Northwest Crafts Alliance, 2005).

#### *Collaboration with Property Developers*

CBED projects in Dallas and Los Angeles found partners in property managers and developers. Washington also benefited from a project that could be called an incubator in a business related to fashion, interior design. In 1979, Jack Benaroya, a local property developer who also contributed to the arts, built The Seattle Design Center (SDC) in Georgetown, an old industrial center, to house showrooms, studios and offices for over 65 interior design and furnishing businesses. SDC became a magnet for many activities, meetings and conferences that educated and informed the interior design industry and the public. Showrooms in the SDC used workshops in the surrounding area to make products for the clients, some of which were textile based (Seattle Design Center, 2005). SDC deserved to be considered a business incubator not only because it brought together and stimulated creativity, but also because it helped to revitalize a declining industrial area (Freeman, 1998).



Northwest Work Lofts was originally an industrial building on the north end of Belltown in Seattle. It attracted artists and designers as tenants from the 1950s (Northwest Work Lofts, 2003). By the time it was purchased by Triad Development in 2000, it was already a center of creativity and innovation. Triad renovated architectural features and provided more visibility. Over the years Northwest Work Lofts housed many start-up designers, some of whom outgrew the Lofts and relocated to areas like Georgetown near the SDC. The success of Northwest Work Lofts stimulated investment and development of nearby property for arts and crafts business lofts (Broberg, 2003). Small towns all over Washington attracted investors and established centers for local artists to show their work and to attract tourism. Issaquah, for example, received a boost toward becoming an arts center in 2005 when property developers Keith and Kate Watts bought 20,000 square feet of commercial space with the idea of revitalizing a run down strip called Front Street into an art and retail zone by leasing to artists and specialty boutiques (Krishnan, 2006).

*Collaboration: National Trade Associations with Local Chapters*

Many businesses in Washington that were not part of traditional apparel and textile manufacturing nonetheless produced or maintained textile based products. They were actively involved in local chapters of national or international associations that met their business needs including certification, trade shows, professional development, connection to suppliers and customers, lobbying to protect interests, and access to research and statistical information on markets. By joining national groups, local

businesses gained legitimacy, added their voices to lobbying efforts and gained access to suppliers and markets that might not have been available to smaller, local organization.

Some couturiers and custom sewing shops were members of the Custom Tailors who offered certification programs (Custom Tailors and Designers Association of America, 2003). Carpet cleaners instituted an extensive training and certification program (Carpet Cleaners' Institute of the Northwest, 2005). Dry Cleaners enjoyed training, certification and education through the Fabricare Institute (International Fabricare Institute, 2006). Companies that produced team sport and advertising products joined together for trade events (Northwest Promotional Product Association, 2006). Washington producers in the booming pet product industry which was heavily textile based participated in their national association (American Pet Products Manufacturers Association, 2006).

The Seattle chapter of Fashion Group International (FGI) was opened when the premier department store Frederick & Nelson started to send its buyers to New York in the 1940s. In the 1990s FGI Seattle expanded from its traditional base among retail and marketing professionals to including executives from all areas of the fashion and apparel business. From its beginnings in the 1920s FGI's mission included education in design and fashion related fields (Fashion Group International, 2006). FGI leaders were involved in CBED in Toronto (Toronto Fashion Incubator, 2006), Dallas, (Dallas Fashion Incubator, 2006) and Chicago (Apparel Industry Board, 2005) and San Francisco (L. Stametz, personal communication, 2006). FGI Executive Director Margaret Hayes acknowledged in 2005 that Seattle had potential as a location for another fashion

incubator and expressed interest in exploring the possibility of FGI involvement (M. Hayes personal communication, May 5, 2005).

### Collaboration and Conflict in Apparel and Textile Education in Washington

CBED projects in apparel and textiles in regions outside of Washington have included educational components. [TC] <sup>2</sup> and LARC provided training in new technologies; TFI and PDX offered classes in design business skills; Dunedin Fashion Incubator involved a university. In Washington education was at the core of policy for implementation of CBED. In 2003, “Cluster Based Workforce Development: A Community College Approach” (Jacobs & Rosenfeld, 2003) was commissioned by ten states including Washington. The report suggests that two and four year technical colleges are a good choice to lead consortiums in CBED projects.

Textiles and apparel content courses have been taught in four year state or private colleges, art colleges, vocational schools or in technical and community colleges since the early years of statehood. There were periods in which the collaboration between educational programs, the apparel and textile business and state agencies was strong enough to have been formed the basis for an economic cluster.

#### *Collaboration: Home Economics*

There was a time for almost a century, when the University of Washington’s (UW) Textile Sciences Department was not only designated by the state legislature to be the leader of textile and apparel education and research in Washington but was also an important part of the apparel and textile business. Since the Textile Sciences program

was closed in the early 1980s, cohesion and continuity in the apparel and textile community has been lost.

Textile education from the mid-19<sup>th</sup> to the mid-20<sup>th</sup> Centuries in Washington was the result of two major forces. The first, the civic activism of the Women's Movement, was expressed in the Women's Clubs which were partially responsible for creating Home Economics as an academic discipline and for its introduction into primary and secondary school curricula. The second force was the commitment of the United States federal government to creating an educated, productive populace. Federal funding and organizational assistance was provided for the training of vocational education teachers and the establishment of strong relationships between education, industry, and agriculture. Home Economics, as a part of this initiative, reflected the visions and sentiments of the national agenda (Raitt, 1929).

When the Washington State Federation of Women's Clubs (WSFWC) was formed in 1897, one of its primary initiatives was the establishment of primary schools around the state with a unified curriculum. By 1914, when their goal was met, and uniform exams were required to graduate from eighth grade, Home Economics was one of the three possible subject areas along with Manual Training and Agriculture. Women's clubs were also responsible for persuading the Washington State Legislature to include a Home Economics Department at the University of Washington (UW) (Raitt, 1929).

*Collaboration: Federal and State Aid for Teacher Training*

In 1917 The Smith-Hughes Act provided federal funding, matched at the state level, to the UW and Washington State University (WSU) to train vocational teachers in Agriculture, Trades and Home Economics (Raitt, 1929). WSU, Washington's land grant college which had opened in 1892, had already received grants under the Hatch (1887) and Smith-Lever Acts (1913) to provide farm families with training in Domestic Economy through Extension Services and experiment stations. Continued federal and state funding helped build a Home Economics department at the UW that attracted leaders of national standing such as Josephine Berry and Agnes Craig and allowed it to confer masters degrees by 1928 (Raitt, 1929).

The teachers being trained at WSU and the UW were not only teaching in primary and secondary schools, they were also educating college level instructors who taught in the Normal Schools (later called colleges) (Rowntree, 1940). Eastern Washington University (EWU) at Cheney, originally a private teachers' college, offered instruction in Home Economics as early as 1903 under the title "Manual and Physical Training" and "Domestic Arts for Women" in 1909 (Mutschler, 2005). When the other Normal Schools, Central Washington University (CWU) at Ellensburg, and Western Washington University (WWU) at Bellingham followed with Home Economics departments of their own, they found instructors among graduates of the UW and WSU.

The Home Economics departments at the three Normal Colleges, the UW and WSU in the first half of the 20<sup>th</sup> Century were held by a unifying force, the American Association of Home Economics (AAHE) and its local chapter, the Washington Association of Home Economics (WAHE) (Raitt, 1929) which was opened by a group of

teachers within Washington Educational Association in 1909 (Washington Association of Family and Consumer Sciences, 2005). The WAHE held meetings of deans and administrators of Home Economics to share information about curricula and methodology in the departments around the state (Ramsland, 1996). Washington educators were participants and leaders when the United States Department of Agriculture sponsored AAHE regional and national conferences to promote consistency in teaching methods and subject matter in Home Economics (Rudd, 1991).

*Collaboration: the War on Poverty*

In 1948 when the Baby Boom was increasing the need for teachers, the Washington State Board for Vocational Education provided federal and state funds to the UW, WSU the three Normal Colleges to train certified vocational Home Economics teachers for secondary schools (Rowntree, 1948). During the War on Poverty in the 1970s, the Washington State Legislature followed the national trend of serving disadvantaged children and families through research and training in nutrition and early childhood education (Johnson, 1971). When Home Economics departments were chosen to lead these efforts, the teaching of textiles and apparel knowledge became a source of vocational education for unemployed youth. The UW was chosen to coordinate a program to teach young people to earn an income from home by altering and cleaning apparel (Washington State Coordinating Council for Occupational Education, 1971).

### *Collaboration: Industry Training Programs*

The War on Poverty was a result of changes in social structure and cultural understanding of equality, justice and power. These changes contributed to new attitudes held by women about their roles in the family and the work place. Because women were demanding education for occupations outside of the home and schoolroom, the validity of Home Economics as a discipline was called into question. Feminist leader Gloria Steinem's remark that home economics was from a cultural ghetto (Steinem, 1970) underscored the loss of support for Home Economics. Steinem and the feminists of the 1970s had forgotten that of the ideals of the early Women's Movement were compatible with the entry of women into the arena of business and industry.

In Washington in the 1920s and 1930s, students from the UW, benefiting from the socially progressive, urban environment of Seattle, were finding jobs in the apparel and textile business. Local apparel wholesalers, retailers and manufacturers established an advisory board that helped the Textile Sciences Department to design an extensive training program to prepare students for positions in their businesses. Faculty members led demonstrations and field trips to stores and factories where they observed apparel production or merchandising and received instruction directly from technicians or managers (Raitt, 1929). In 1944 Frederick & Nelson offered paid part time internships as well as tuition and book fees to students majoring in Marketing in the College of Economics and Business (Miller, 1944).

Immediately after WWII, growth in the apparel industry produced more demand for trained workers and technicians. In her 1947 Annual Report, Jenny Rowntree, Chair of the Home Economics Department, announced the UW's intentions to create a new

curriculum in apparel merchandising and design in response to the request of the Chamber of Commerce and members of the clothing industry (Rowntree, 1947). When the new program was launched in 1948, the advisory board of manufacturers and retailers was directly involved in making decisions about the length of time students should spend on the job, how often they should rotate within a company to avoid union issues and how much they should be paid (Klima, 1948).

*Conflict: Home Economics Professionalize Programs under  
Pressure from Administrations*

In the 1970s and 1980s as universities followed the trend to specialize and professionalize disciplines, Home Economics departments splintered into several disciplines such as Interior Design, Nutrition, Merchandising or Fashion Design. In the 1970s, when the EWU Home Economics Department was absorbed into the Division of Professional Programs, the Apparel Merchandising program survived. This degree had been developed by Louise Prugh in the mid-1960s with the help of local businesses and included research, projects and internships designed to prepare students for management roles in retail (Prugh, 1965). The Apparel Merchandising program was closed in 1984 as a result of EWU's initiative to specialize in technology education (L. Prugh, personal communication, 2004).

In the 1970s after the textile program at CWU split into two sections, Merchandising and Clothing Construction, it struggled to remain open (C. Schactler, personal communication, February 10, 2004). In spite of the high regard its graduates commanded among apparel business managers and recruiters, Clothing Construction



classes were no longer offered by the early 2000s (E. Huntington, personal communication, March 11, 2004).

In the 1970s in the Home Economic Department at WSU, Textiles and Apparel and Interior Design, Consumer Science and Nutrition all became separate departments. The Apparel Merchandising option was strong, but the Apparel Design option was allowed to decline. In the 1980s, the Apparel and Textiles faculty had dwindled to three and there were only 40 majors. In the 1990s by promoting the Apparel Design option and by engaging business leaders on the Advisory Board, the Apparel, Merchandising and Textiles Department started to grow again. In spite of another split with the Interior Design program, the number of faculty grew to eight by 1995 with over 300 majors. By the early 2000s the Apparel, Merchandising, Design and Textiles program became an important source of well trained graduates for the Washington textile and apparel industry (C. Salusso, personal communication, February 25, 2007).

As WWU followed the trend away from its core mission as a normal school in the 1960s, and became increasingly dedicated to professional development, the Home Economics department was under continual pressure to close (Ramsland, 1993). As the sub-disciplines within Home Economics split off from each other it looked as though apparel and textiles would not survive. Then, in the early 1980s, a sudden change in WWU's administrative policy prompted the opening of a satellite program in apparel and textiles in the heart of Seattle called the Center for Apparel Design/Fashion Marketing (Ramsland, 1996).

*Conflict: Closure of Textile Sciences Department by UW Administration*

By the early 1980s the apparel industry was going through its unexpected boom, due to the growth of Britannia, its off-shoots and Preline. But by the mid-1980s, graduates of the Textile Sciences program at the UW were again in high demand (MacDonald, 1985). At the same time, the university's administration was shifting its emphasis from the training of leaders of commerce and industry to educating academics and professionals. Using budget cuts as a reason to eliminate programs that were characterized as vocational; the UW closed the Textile Sciences department in 1983. The value that the department had brought to the apparel industry can be measured by the outrage expressed in letters written by industry leaders when the department closed (Strawman, 1982).

*Collaboration: The Center for Apparel Design/Fashion Marketing*

When UW Textile Sciences Department closed in 1983, WWU, following a popular trend in academia, seized an opportunity to establish a new satellite in Seattle. WWU hired most of the UW Textile Sciences faculty and opened the Center for Apparel Design/Fashion Marketing in a high-rise office building in downtown Seattle near the retail core, apparel wholesale offices and the Trade Center (MacDonald, 1985). The list of advisory board members for the program, which read like a list of who's who in fashion, included executives from Generra, Union Bay, Nordstrom, Roffe and even a state legislator (Center for Apparel Design/Fashion Marketing, 1988). The unique and dynamic curriculum which emerged from their collaboration reflected the burgeoning

international fashion and apparel business in Seattle at the time. It even included an international field trip to Hong Kong.

For a brief time in the 1980s when all the elements of an economic cluster were in place: the creation of new businesses like Britannia; Preline and the hub of the national wholesale-retail supply chain; the Trade Center; the outdoor businesses expanding and becoming unified; the port exploding with imports; the Center for Apparel Design/Fashion Marketing preparing a foundation for growth by training new professionals . In spite of the success and popularity of the WWU program, the Center closed in the early 1990s due to another policy shift when the university administration decided that it would no longer promote satellites (Ramslund, 1996). By the time the Center closed, the fashion boom in Washington had died down.

### *State Support for the Community College System*

While the colleges and universities in Washington State were distancing themselves from career education in the 1970s-1980s, the legislature embarked on a new path to provide postsecondary vocational education. Washington State Board for Community and Technical Colleges (WSBCTC) was established in 1965 to combine and rationalize existing junior colleges and private vocational schools into a network of community and technical colleges. After a bill was passed in 1967 overturning a law that prevented the state from building community colleges close to existing state colleges and universities, the system was able to expand (Washington State Board for Community and Technical Colleges, 2006).

At the time of expansion, textiles based vocational education in tailoring and apparel construction was already a part of the curriculum at existing colleges like Lake Washington and Bates Technical Colleges. By the 1980s Fashion Design, Merchandising or Marketing courses were being offered at Edmonds, Highline, Shoreline, Centralia, Columbia Basin, and Spokane Falls and Seattle Central Community Colleges and Pierce College.

In the 1990s and 2000s, some of the community college Fashion or Merchandising programs changed. Highline's was absorbed into the Business program. Pierce's focused on Marketing and some programs, including Shoreline's were closed (Washington State Board for Community and Technical Colleges, 2006).

In the 1980s companies like Britannia which were sourcing apparel offshore needed technical people who were skilled in communicating about fit, construction and materials to their counterparts abroad. SCCC stepped into the role that had once been played by the UW Textile Sciences program, training technicians in this new area of expertise. Like the UW's successor, the Center for Apparel Design/Fashion Marketing, SCCC was able to design a curriculum that mirrored the local apparel business because its Technical Advisory Committee was comprised of industry leaders, designers and technicians.

#### *Collaboration: CBED through Community Colleges*

With the founding of the Workforce Training and Education Coordinating Board (WTECB) in 1991 Washington showed its commitment to advancing CBED through the postsecondary education system. The WTECB assigned community colleges to lead

consortiums for the purpose of creating Skills Standards and certification projects (Workforce Training and Education Coordinating Board, 2002). Although there have been no CBED projects specifically designed for the apparel and textile industry in Washington, some have been related. The Retail Skill Center in Seattle's Westlake Center, funded partially by the National Retail Federation Foundation ®, local businesses and SCCC operated from 1999-2000 (National Retail Federation Foundation, 2004). A Marketing Skills Standard project was lead by faculty members from the apparel program at Pierce College in 2003-2004 (Marketing Skills Standards, 2003). A Manufacturing Skills Standard conducted by Boeing describes processes that are very close to product development in apparel (Boeing Company and the State of Washington through State Board for Technical and Community Colleges, 1999). The potential to create an Apparel Product Development Skills Standards project using these three projects as a starting point was not explored or developed in the early 2000s. Skills Standard activity is now subsumed in larger, more comprehensive CBED initiatives (S.Z. Hanson, personal communication, May 28, 2003).

*Collaboration: Advisory Boards for Private Colleges*

From the 1970s through the 2000s education in apparel and textiles in Washington was not confined to public institutions. Seattle Pacific University's Home Economics Department evolved parallel to other colleges in Washington. Instructors were expected to earn advanced degrees and specialized majors were developed in response to the trend toward professionalization (S. Warnick, personal communication, 2004). The Textile and Clothing major included study in New York at Fashion Institute

of Technology ® (Seattle Pacific University, 2001). The Art Institute of Seattle offered an Associates of Arts degree in Fashion Design (Art Institute of Seattle, 2006). Both schools had advisory boards of industry professionals.

### *Collaboration: Educators' Associations*

Apparel and textiles educators at community and private colleges the 1980s to 2000s were not as likely to join Washington Association for Family and Consumer Sciences (WAFCS formerly WSHE) as their counterparts at the UW, WSU or the State Universities had in years past. They may not have received their education in a Home Economics department or their careers may not have depended on publishing in scholarly journals. Joining the WAFCS might not have provided the kind of connection with the apparel and textile industry that it had in the early 20<sup>th</sup> Century (Washington Association of Family and Consumer Sciences, 2005). Some WAFCS members belonged to the International Textile and Apparel Association (ITAA) which formed as a separate organization in the 1979 (International Textiles and Apparel Association, 2003). Had educators from community and private colleges become members of ITAA, they might have joined projects like the Pacific Northwest Apparel and Textiles Consortium which assisted students in finding internships in the late 1990s (Evanson, 1999).

In the 1990s CWU professor Carolyn Schactler noticed that the cohesion among apparel and textile programs in Washington had eroded after the close of the UW's Textile Sciences Department. Schactler organized Fashion Career Symposia where students and educators from public universities, community colleges and private colleges joined industry professionals at a different college annually from 1991 to 1999 to

network, share information and receive career advice (C. Schactler, personal communication, 2004).

## ANALYSIS

If leaders in Washington had considered recognizing and investing in the textile and apparel business as a potential economic cluster at any time in the twentieth century, they would have found that necessary determinants as described by Porter (1990) such as skill, supply chain and market existed in varying proportions to each other in each decade. They would also have found that the relationships among stakeholders were characterized by collaboration in some periods and conflict in others.

Throughout the years of industrial expansion in Washington, manufacturers competed with workers for control over the wealth and power produced by manufacturing. Administrations of colleges and universities made decisions to close programs without concern for the communities they served. The vision of these leaders did not transcend their own immediate goals. Textile based product manufacturers, factories, wholesalers and retailers with overlapping needs for supplies, skilled workers and space did not notice the opportunity to work together because they defined themselves by their end products and market segments rather than their shared processes and needs.

Some groups of stakeholders formed alliances. Retailers and wholesalers instituted trade shows, industry leaders joined college advisory boards, and entrepreneurs organized showcases for designers. But in only one case, the University of Washington

Textile Sciences program, did government agencies support apparel and textiles in Washington.

For nearly a century the UW program was the hub of state and federally funded initiatives for education, industry and commerce and the community. When the department closed, the state failed to assign its many roles to another powerful institution. Programs that the UW administered in the community ended; relationships with industry were transferred to other colleges or lost; resources for research were no longer accessible to the public. The UW would have been the strongest candidate for leading Cluster Based Economic Development in Washington if the program had survived.

A laboratory and training center dedicated to building factory efficiency like [TC] <sup>2</sup> ® might have helped preserve the factory base in the 1990s. The Northwest Sewn Products Association was already committed to participating in this kind of effort, but its base of industry leaders and educators was primarily in Portland. Regional collaboration among government agencies at the state level would have been necessary to galvanize the energy of this group into the kind of commitment and outreach that has sustained [TC] <sup>2</sup>. Labor interests were too weak by the 1990s to provide worker re-training that the International Ladies Garment Workers Union had started at the Garment Industry Development Corporation in New York.

A fashion incubator like Toronto might have been possible in the 1980s, led by the Pacific Northwest Apparel Association, the Trade Center and the Art Institute of Seattle. This group would have included property developers, wholesalers, retailers, and a new art college, all in the same building. The city of Seattle, however, did not



recognize the value of this resource and did not find a creative way to sustain or transform it during economic transition.

The initiative of individuals or small groups of educators fostered the collaboration between colleges and businesses through the Fashion Career Symposia and the Pacific Northwest Apparel and Textiles Consortium. These efforts might have continued if a consistent source of funding and encouragement had been available to sustain them.

Entrepreneurs like Biringer and Rosson provided new designers with market exposure and access to markets; property developers supplied affordable space. These private individuals demonstrated the kind of leadership that emanated from local and national governments during the founding of incubator projects in Toronto, Melbourne and Dunedin.

The outdoor industry was the most cohesive segment of the apparel and textile business. Its survival was based not on state economic policy but on an inexhaustible supply of mountains, rivers and innovative outdoor enthusiasts and several strong national trade organizations. Oregon had already declared apparel and outdoor equipment to be an economic cluster; would the State of Washington follow Oregon's lead and finally recognize the apparel and textiles as an economic cluster?

## CONCLUSION

In 2004 Washington State passed legislation to provide funding for CBED projects such as incubators. This author made a proposal to the State Director of Economic Development, Victor Vasquez, asking that textiles and apparel be considered

as an economic cluster worthy of capital funds for an incubator. Vasquez was interested and acknowledged that a case could be made that a cluster existed. He did not hold out hope that an apparel and textiles incubator would win a grant because the current round of funding was intended for development in rural areas, away from the center of apparel and textile activity. Vasquez said that the industry would have to make something happen on its own (V. Vasquez, personal communication, June 30, 2005).

Segments of the apparel and textile business in Washington have shown that they can work together in narrowly defined groups and for specific reasons, but stakeholders do not have a history of working as an entire community without leadership. The qualities that have contributed to the longevity of the apparel and textile business, like innovation and dynamism, defeat the kind of collaborative process that builds consortiums and CBED projects. Leadership at the state level of the kind that existed when the UW Textile Sciences Department was a hub of research and commercial activity may be necessary to guide stakeholders to understanding how much they have in common and how much they have to gain from working together.

## REFERENCES

- American Pet Products Manufacturers Association. (2006). *APPMA Backgrounder*. Retrieved October 14, 2006, from [http://www.appma.org/about\\_backgrounder.asp](http://www.appma.org/about_backgrounder.asp)
- Anderson, M. A. (1937). *Analysis of the attempts of workers in the Seattle needle trades to organize and bargain collectively under section 7(a) of the National Recovery Act*. Unpublished master's thesis, University of Washington, Seattle.
- Apparel Industry Board. (2005). *Apparel Industry Board, Inc.* Retrieved December 16, 2006, from <http://www.aibi.com>

- Art Institute of Seattle. (2006). *History and Mission*. Retrieved December 20, 2006, from [http://www.artinstitutes.edu/seattle/about\\_history.asp](http://www.artinstitutes.edu/seattle/about_history.asp)
- Association of Pacific Northwest Quilters. (2006). *About us*. Retrieved December 29, 2006, from <http://www.apnq.org>
- Beaulac, A., & Biringer, M. (2004). *Crave Seattle: An Urban Girl's Manifesto*. Seattle: Crave Party.
- Beers, C. (1996, June 14). Olive Smith, 79, Set Seattle Fashion, Style. *Seattle Times*, p. B3.
- Bendetti, W. (2002, October 11). Dumb clothing with a smart attitude: Seattle designer fashions fun and funky clothes for the adventurous dresser. *Seattle Post-Intelligencer*, p. E1.
- Bertagnoli, L. (2003, October 13). Designer duds find showcase: New fashionistas find frugal locale to display wares. *Crain's Chicago Business*, Vol. 26, p. SB16.
- Best Of The Fests: 1999 Best Of The Northwest. (1999, November 18). *Seattle Times*, p. I.24.
- Biz Trade Shows. (2005). *Pacific Northwest Apparel Association*. Retrieved July 8, 2005, from <http://www.biztradeshows.com/organizers/pacific-northwest.html>
- Blue Sky Communications. (2003). *The VIII Olympic Winter Games Squaw Valley USA*. Retrieved September 1, 2006, from <http://www.tahoestbest.com/Skiing/svuoly.htm>
- Boeing Company and the State of Washington through State Board for Technical and Community Colleges. (1999). *Manufacturing/Engineering Technology Skills Standards*. Retrieved September 9, 2003, from [http://www.wa-skills.com/PDFs/manufact\\_tech/MET.pdf](http://www.wa-skills.com/PDFs/manufact_tech/MET.pdf)
- Bowlby, J. (2004). *Design Services Network Northwest*. Retrieved July 10, 2004, from <http://www.designservicesnorthwest.com>
- Bowman, F. (2006). *Fashion Reflected--Fashion gets a lift from the Mayor's Office and I got to witness it all*. Retrieved December 29, 2006, from [http://www.chitowndailynews.org/The+big+city/2006/1/6/Fashion\\_Reflected\\_Fashion\\_gets\\_a\\_lift\\_from\\_the\\_Mayors\\_Office\\_and\\_I\\_got\\_to\\_witness\\_it\\_all](http://www.chitowndailynews.org/The+big+city/2006/1/6/Fashion_Reflected_Fashion_gets_a_lift_from_the_Mayors_Office_and_I_got_to_witness_it_all)
- Broberg, B. (2003, December 12). Dueling 'funky' work loft spaces catch on Varied tenant mix quick to grab space in Bayview and Northwest Industrial buildings, *Puget Sound Business Journal*. Seattle, Vol. 24, Iss. 32, p. 26.

- Brown, M. (1987, September/October). *Making Fashion History: Port of Seattle Tradelines Magazine*. Seattle Public Library, Washington Company File.
- C.C. Filson Co. (2006). *Filson--rugged quality for over 100 years*. Retrieved July 29, 2006, from <http://www.filson.com/corp/index.jsp?page=aboutus>
- Carpet Cleaners' Institute of the Northwest. (2005). *Chapter Events*. Retrieved July 21, 2006, from <http://www.ccinw.org/Washington>
- Center for Apparel Design/Fashion Marketing. (1988). *Advisory Committee*: Western Washington University Archives and Records Center.
- Chasan, D. J. (1990). The Puget Sound's Sportswear Industry: "It's a chess game": *Pacific Northwest Executive*: Seattle Public Library, Washington Company File.
- Choy, G. (2006). *Seattle International Fashion Week*. Retrieved December 29, 2006, from <http://www.sifashionweek.com/flash.html>
- Columbia Sportswear Buys Pacific Trail/Moonstone. (2006). Retrieved October 1, 2006, from [http://www.sportinggoodsbusiness.com/sportinggoodsbusiness/outdoorbusiness/news/article\\_display.jsp?vnu\\_content\\_id=1002235501](http://www.sportinggoodsbusiness.com/sportinggoodsbusiness/outdoorbusiness/news/article_display.jsp?vnu_content_id=1002235501)
- Custom Tailors and Designers Association of America. (2003). *Custom Tailors and Designers Association of America*. Retrieved Dec. 9, 2003, from <http://www.ctda.com/> and <http://www.ctda.com/education.html>
- Da Naan, W. (2005). *Seattle Fashion Industry Group Launches Seattle Style TV*. Retrieved December 15, 2006, from <http://fashionista.meetup.com/52/boards/view/viewthread?thread=1606003>
- Dallas Fashion Incubator. (2006). *Dallas Fashion Incubator*. Retrieved December 16, 2006, from <http://www.dallasfashionincubator.org>
- de Catanzaro, C., & Janecek, D.L. (2002). *United Garment Workers of America Collection*. Retrieved July 15, 2005, from Special Collections Department, Georgia State University <http://www.library.gsu.edu/spcoll/collections/Labor/L1992-17.htm>
- Dimet, L. (2006). *The Chicagoland Entrepreneurial Center's New Stitches Fashion Program Is A Big Step In The Right Direction*. Retrieved December 28, 2006, from [http://secondcitystyle.typepad.com/second\\_city\\_style/2006/12/eye\\_on\\_chicago.html](http://secondcitystyle.typepad.com/second_city_style/2006/12/eye_on_chicago.html)

- Dunedin Fashion Incubator. (2006). *Dunedin Fashion Incubator*. Retrieved December 29, 2006, from <http://www.dfi.co.nz>
- Economic Development Administration. (1997). *Cluster-Based Economic Development: A Key to Regional Competitiveness--Summary*. Retrieved November 1, 2004, from [http://www.eda.gov/ImageCache/EDAPublic/documents/pdfdocs/1g3\\_5f5\\_5fcluster\\_2epdf/v1/1g3\\_5f5\\_5fcluster.pdf](http://www.eda.gov/ImageCache/EDAPublic/documents/pdfdocs/1g3_5f5_5fcluster_2epdf/v1/1g3_5f5_5fcluster.pdf)
- Economic Development Administration. (2004a). *Annual Report 2004*. Retrieved October 16, 2006, from [http://www.eda.gov/ImageCache/EDAPublic/documents/pdfdocs/2004annrptsection5\\_2epdf/v1/2004annrptsection5.pdf](http://www.eda.gov/ImageCache/EDAPublic/documents/pdfdocs/2004annrptsection5_2epdf/v1/2004annrptsection5.pdf)
- Economic Development Administration. (2004b). *Economic Development: Support for Planning Organizations*. Retrieved October 16, 2006, from [http://12.46.245.173/pls/portal30/CATALOG.PROGRAM\\_TEXT\\_RPT.SHOW?p\\_arg\\_names=prog\\_nbr&p\\_arg\\_values=11.302](http://12.46.245.173/pls/portal30/CATALOG.PROGRAM_TEXT_RPT.SHOW?p_arg_names=prog_nbr&p_arg_values=11.302)
- Economic Development Administration. (2006a). *Mission*. Retrieved December 2, 2006, from <http://www.eda.gov/AboutEDA/Mission.xml>
- Economic Development Administration. (2006b). *Investment programs*. Retrieved December 16, 2006, from <http://www.eda.gov/AboutEDA/Programs.xml>
- Eddie Bauer. (2006). *Our Company Historical Timeline*. Retrieved July 29, 2006, from [http://www.eddiebauer.com/about/company\\_info/history.asp](http://www.eddiebauer.com/about/company_info/history.asp)
- Evanson, S. (1999). *Building Internships with the Pacific Northwest Apparel and Textiles Consortium*. Retrieved December 29, 2006, from [http://www.extension.uidaho.edu/impacts/Pdf\\_99/imp00evenson1-99.pdf](http://www.extension.uidaho.edu/impacts/Pdf_99/imp00evenson1-99.pdf)
- Fashion Business Incorporated. (2006a). *Fashion Business Incorporated*. Retrieved December 12, 2006, from <http://www.fashionbizinc.org>
- Fashion Business Incorporated. (2006b). *Founding Board*. Retrieved December 12, 2006, from <http://www.fashionbizinc.org/Management.asp>
- Fashion Group International. (2006). *Mission Statement*. Retrieved December 16, 2006, from <http://www.fgi.org/index.php?news=645>
- Freeman, P. (1998). *Georgetown struggles to define itself Residents disagree over whether to maintain the community's industrial roots*. Retrieved December 29, 2006, from <http://seattle.bizjournals.com/seattle/stories/1998/08/24/focus8.html>

- Garment Industry Development Corporation. (2004). *About Us*. Retrieved November 1, 2004, from <http://www.gidc.org>
- Gee, S. (Writer) (2001). *If Tired Hands Could Talk: Stories of Asian Garment Workers* [Video]: (Available from Wing Luke Asian Museum, 407 Seventh Ave. S., Seattle, WA 98104).
- Grbavac, R. (2001). *The Northwest Sewn Products Association*. Retrieved December 20, 2006, from [http://cache.zoominfo.com/cachedpage/?archive\\_id=0&page\\_id=70425710&page\\_url=%2f%2fwww.nwsewn.com%2fwelcome.html&page\\_last\\_updated=1%2f8%2f2001+1%3a29%3a19+PM&firstName=Rick&lastName=Grbavac](http://cache.zoominfo.com/cachedpage/?archive_id=0&page_id=70425710&page_url=%2f%2fwww.nwsewn.com%2fwelcome.html&page_last_updated=1%2f8%2f2001+1%3a29%3a19+PM&firstName=Rick&lastName=Grbavac)
- Gwinn, M. A., & Skidmore, D. (1994, January 6). U.S. Cuts China's Textile, Clothing Quotas: Punitive Action Expected To Trim Chinese Exports By \$1.2 Billion. *Seattle Times*, p. D1.
- Hofman, M. (2001). *A Brand Is Born*. Retrieved October 12, 2004, from <http://www.inc.com/magazine/20011201/23735.html>
- Holloway, J. (2006). *Fashion-Enter*. Retrieved December 29, 2006, from <http://www.fashion-enter.com>
- International Fabricare Institute. (2006). *The textile and fabric care industry*. Retrieved July 21, 2006, from <http://www.ifi.org>
- International Textiles and Apparel Association. (2003). *International Textile and Apparel Association*. Retrieved September 2, 2003, from <http://www.itaaonline.org>
- Jacobs, J., Liston, C., & Rosenfeld, S. (2003, March 2003). *Cluster Based Workforce Development: A Community College Approach*. Retrieved July 15, 2005, from <http://www.rtsinc.org/publications/Whitepapers4%20doc.pdf>
- JanSport. (2006). *JanSport History*. Retrieved October 14, 2006, from <http://www.infomat.net/infomat/rd741/rd1/database/jansport/index.asp>
- Johnson, M. L. (1971). *University of Washington School of Home Economics, Annual Report 1970-71*. Seattle: School of Home Economics, University of Washington Library, Special Collections.
- Jones, S. (2006). *Macy's First Fashion Incubator Planned for Field's*. Retrieved December 16, 2006, from <http://chicagobusiness.com/cgi-bin/news.pl?id=20747>
- K2 Sports. (2003). *History*. Retrieved December 16, 2003, from <http://www.k2sports.com>

- Kelly, J. (2006). *Fashion First*. Retrieved December 29, 2006, from <http://fashionfirstseattle.com>
- Kikkawa, T. (2005). *Strategies of Japanese Corporations Facing Global Competition: The Case of Sony and Toray*. Retrieved October 16, 2006, from <http://project.iss.u-tokyo.ac.jp/kikkawa/iss-6.pdf>
- Klima, J. (1948). *University of Washington, Apparel and Merchandising Curriculum: Notes from advisory board meeting with industry*. Seattle: University of Washington Library, Special Collections.
- Krishnan, S. (2006, August 17). Arts buzz builds in Issaquah. *Seattle Times*, p. B2.
- Lange, G. (1999). *Tailors form Tailors' Union Local No. 71 on February 15, 1889*. *HistoryLink.org Essay 1083*, from [http://www.historylink.org/essays/output.cfm?file\\_id=1083](http://www.historylink.org/essays/output.cfm?file_id=1083)
- London Development Agency. (2006). *London Apparel Resource Center*. Retrieved December 29, 2006, from <http://www.londonapparel.com>
- MacDonald, S. (1985, March 15). Outside Universities' Classes Successfully Fill Seattle-Area Needs. *Seattle Times*, p. B2.
- Manufacturers Association of Washington. (1923). *Manufacturers Directory and Lists of Products Manufactured by Them, Seventh Edition*. Seattle.
- Manufacturers Association of Washington. (1926). *Manufacturers Directory and Lists of Products Manufactured by Them, Eighth Edition*. Seattle.
- Manufacturers Association of Washington. (1931). *Manufacturers Directory and Lists of Products Manufactured by Them, Ninth Edition*. Seattle.
- Manufacturers Association of Washington. (1937). *Manufacturers Directory and Lists of Products Manufactured by Them, Tenth Edition*. Seattle.
- Marketing Skills Standards. (2003). *Final Report 2002-2003*. Retrieved October 12, 2006, from [http://www.marketingskills.org/msspdfs/2002-2003\\_annual\\_report.pdf](http://www.marketingskills.org/msspdfs/2002-2003_annual_report.pdf)
- Meeker, E. (1870). *Washington Territory West of the Cascade Mountains*. Olympia: Library of Congress.
- Meeker, E. (1921). *Seventy Years of Progress*. Seattle: Allstrum.

- Melbourne Development Board. (2006). *Melbourne Design and Fashion Incubator*. Retrieved December 29, 2006, from [http://www.mdb.asn.au/business/business\\_incubators2.cfm](http://www.mdb.asn.au/business/business_incubators2.cfm)
- Men's Apparel Guild in California. (2006). *Magic, the Business of Fashion*. Retrieved December 29, 2006, from <http://show.magiconline.com>
- Miller, C. J. (1944). Letter: Frederick & Nelson-University of Washington Retail Employment-Scholarships. Seattle: University of Washington Library, Special Collections.
- Mulady, K. (2001, August 7). Pacific Trail buys ski-wear makers: Acquisition of Roffe and Moonstone brings in well-known brand names. *Seattle Post-intelligencer*, p. D1.
- Mutschler, C. V. (2005). *The History of Eastern Washington University, A Chronology*. Cheney: Eastern Washington, University Special Collections.
- Nabbefeld, J. (1998). *Trade Center sale closes*. Retrieved July 8, 2005, from <http://seattle.bizjournals.com/seattle/stories/1998/04/27/newscolumn4.html>
- National Retail Federation Foundation. (2004). *Retail Skills Centers*. Retrieved January 3, 2004, from <http://www.nrf.com/content/default.asp?folder=foundation&file=rsc.htm>
- National Ski & Snowboard Retailers Association. (2006). *History*. Retrieved October 14, 2006, from <http://www.nssra.com/2001/nssra/index.asp?centre=info&section=history>
- Nelson, G. (1991, August 28). *Finding A Fit At Seattle Preline*. Retrieved October 16, 2006, from <http://archives.seattletimes.nwsourc.com/cgi-bin/taxis.cgi/web/vortex/display?slug=1302292&date=19910828&query=Preline>
- Nogaki, S. W. (1992, August 21). Apparel Show Folds: Hard Times In Retailing Industry Force Seattle Preline To Hang It Up. *Seattle Times*, p. D7.
- Northwest Crafts Alliance. (2005). *Best of the Northwest*. Retrieved July 15, 2005, from <http://www.bestnwcrafts.com/index.cfm>
- Northwest Promotional Product Association. (2006). *Northwest Promotional Product Association*. Retrieved July 6, 2006, from <http://www.nwpma.org>
- Northwest Work Lofts. (2003). *Welcome to Northwest Work Lofts*. Retrieved July 8, 2005, from [http://www.northwestworklofts.com/northwest\\_info.html](http://www.northwestworklofts.com/northwest_info.html)



- Ochsner, J. K. (1994). *Shaping Seattle architecture: a historical guide to the architects*. Seattle: University of Washington Press.
- Oregon Business Council. (2005). *Apparel/Sporting Goods*. Retrieved October 13, 2006, from <http://www.oregonclusters.org/apparel.html>
- Outdoor Industry Association. (2005). *The Association*. Retrieved July 12, 2005, from <http://www.outdoorindustry.org/about.association.html>
- Outdoor Retailer. (2005). *About Us*. Retrieved July 11, 2005, from [http://www.outdoorretailer.com/or/about\\_us/index.jsp](http://www.outdoorretailer.com/or/about_us/index.jsp)
- Oxford Industries, I. (2003). *Oxford Industries to Acquire Viewpoint International and Tommy Bahama®*. Retrieved July 29, 2006, from [http://www.oxfordinc.com/FY2003/PR\\_04272003A.htm](http://www.oxfordinc.com/FY2003/PR_04272003A.htm)
- Pacific Northwest Apparel Association. (2005). *About Us*. Retrieved July 14, 2005, from <http://www.seattletrendshow.com>
- Pacific Trail to open factory in Wenatchee. (1971, February 19). *Seattle Times*. Seattle Public Library, Washington Company File.
- Pacific Trail to open Spokane Plant. (1966, July 16). *Seattle Times*. Seattle Public Library, Washington Company File.
- Payton, C. (2000). *King County Historical Bibliography, Part 03: King County Incorporations, HistoryLink.org Essay 7144*. Retrieved August 25, 2006, from [http://www.historylink.org/essays/output.cfm?file\\_id=7144](http://www.historylink.org/essays/output.cfm?file_id=7144)
- Pesotta, R. (1944). *Bread Upon the Waters*. New York: Dodd, Mead.
- Phillips, S. S. (Writer) (1985). *Seattle Styles: A Look at a Booming Industry* [Video]. Seattle Pacific University (Producer): Available through The Seattle Channel: <http://www.seattlechannel.org/schedule/programDetails.asp?title=5010617>.
- Porter, M. E. (1990). *The Competitive Advantage of Nations*. New York: The Free Press.
- Positively Wellington Business. (2006a). *Fashion Headquarter Business Incubator*. Retrieved December 29, 2006, from <http://www.fashionhq.co.nz>
- Positively Wellington Business. (2006b). *About us*. Retrieved December 29, 2006, from <http://www.positivelywellingtonbusiness.co.nz/mainsite/AboutUs.html>
- President's Commission on Industrial Competitiveness. (1985). *Global competition: the new reality: the report of the President's Commission on Industrial Competitiveness*. Washington: United States Government Printing Office.

- Prinzing, D. (1992, April 10). Fashion Fad Unravels for Generra. *Puget Sound Business Journal*, Vol. 12, Iss. 47, p. 1.
- Prism Business Media Inc. (2000). *CMC Acquires Pattern Dimensions*. Retrieved December 14, 2006, from [http://72.14.253.104/search?q=cache:G7RQ8wpU6tcJ:www.stitches.com/news/aparel\\_home\\_news\\_2/index.html+%22joan+remily%22+%22pattern+dimensions%22+CMC&hl=en&client=firefox-a&strip=1](http://72.14.253.104/search?q=cache:G7RQ8wpU6tcJ:www.stitches.com/news/aparel_home_news_2/index.html+%22joan+remily%22+%22pattern+dimensions%22+CMC&hl=en&client=firefox-a&strip=1)
- Prugh, L. (1965). *A Study of the Feasibility of Internship Training for Students Majoring in Merchandising in the Home Economics Department at Eastern Washington State College*. Unpublished master's thesis, Eastern Washington State College, Cheney.
- Radon, L. (2005). *Say Goodnight, Gracie: Bidding adieu to the incubator...* Retrieved December 29, 2006, from [http://www.ultrapdx.com/ultrablog/index\\_html/archive/2005/06/30/say-goodnight-gracie](http://www.ultrapdx.com/ultrablog/index_html/archive/2005/06/30/say-goodnight-gracie)
- Raitt, E. I. (1929). *Home Economics in Washington*. Seattle: Washington University State Historical Society: University of Washington Library, Special Collections.
- Ramsland, D. (1993). Interview with Dr. Dorothy Ramsland. Bellingham: Center for Pacific Northwest Studies, Western Washington University.
- Ramsland, D. (1996). An Interview with Dorothy Ramsland. Bellingham: Center for Pacific Northwest Studies, Western Washington University.
- Riddle, M. (2006). *Snohomish County: Thumbnail History--HistoryLink.org Essay 7877*. Retrieved August 25, 2006, from [http://www.historylink.org/essays/output.cfm?file\\_id=7877](http://www.historylink.org/essays/output.cfm?file_id=7877)
- Rowntree, J. I. (1940). *Biennial Report of the School of Home Economics 1938-40*. Seattle: University of Washington Library, Special Collections.
- Rowntree, J. I. (1947). *Annual Report of the School of Home Economics 1947*. Seattle: University of Washington Library, Special Collections.
- Rowntree, J. I. (1948). *Annual Report, School of Home Economics 1948*. Seattle: University of Washington Library, Special Collections.
- Rudd, N. A. (1991). Textiles and Clothing in Higher Education: Strengthening Linkages and Conceptual Identity. In S. B. Kaiser & M. L. Damhorst (Eds.), *Critical linkages in textiles and clothing subject matter: theory, method, and practice*,

- ITAA Special Publication; #4*. Monument, CO: International Textile and Apparel Association.
- Seattle apparel firm plans \$250,000 plant in Olympia. (1953). *Seattle Times*. Seattle Public Library, Washington Company File.
- Seattle Design Center. (2005). *Seattle Design Center History*. Retrieved July 8, 2005, from [http://seattledesigncenter.com/aboutsdcc/press\\_room.html](http://seattledesigncenter.com/aboutsdcc/press_room.html)
- Seattle Outerwear "Down Filled" Capital. (1970, February 12). *Seattle Times*. Seattle Public Library, Washington Company File.
- Seattle Pacific University. (2001). *Family & Consumer Sciences Department*. Retrieved June 16, 2004, from <http://www.spu.edu/depts/fcs/index.html>
- Sirti. (2006). *Mission, Strategy and Services*. Retrieved December 2, 2006, from <http://www.sirti.org/funding>
- Skoog, L. (2002). *Recreational Equipment Inc.--Catalog Collection*. Retrieved October 14, 2006, from <http://www.alpenglow.org/ski-history/notes/ms/rei-catalogs.html>
- Skutt, G. B. (1966). *The Apparel and Textile Industries of the State of Washington*. Olympia: State of Washington Department of Commerce and Economic Development.
- Small labor pool is a problem to garment industry in Seattle. (1956, February 28). *Seattle Times*. Seattle Public Library, Washington Company File.
- Smarr, S. L. (1988a, April). West Coast Manufacturing: Pacific Trail's Window to the World. *Bobbin*, p. 29.
- Smarr, S. L. (1988b, April). West Coast Manufacturing--Seattle: Supersonic Sportswear Star. *Bobbin*, p. 29.
- Sommers, P. (2001). *Cluster Strategies for Washington*. Seattle: University of Washington, Daniel J. Evans School of Public Affairs.
- Spector, R. (1985, June 17). Sportswear Importers Target Trade-Quota Proposal. *Puget Sound Business Journal*, Vol. 6, Iss. 6, p. 1.
- Spector, R. (1987, September/October). Seattle shows off at Preline. *Port of Seattle Tradelines Magazine*. Seattle Public Library Washington Company File
- Sportswear firm expands. (1956, December 31). *Seattle Daily Journal of Commerce*. Seattle Public Library Washington Company File.

- Springer, P. (2005). *Oregon is Becoming Fashionable*. Retrieved October 16, 2006, from <http://moonhare.tribe.net/thread/44449b7c-e55b-466d-a298-4aa5a9a22174>
- State of Washington Employment Security Department. (1953). *Washington State Manufacturers Product and Employment Listing*. Olympia.
- Steinem, G. (1970, June 7). Women's Liberation Aims to Free Men Too [Electronic version]. *Washington Post*. Retrieved October 13, 2004 from <http://scriptorium.lib.duke.edu/wlm/aims>
- Stratigis Industry Canada. (2006). *Canadian Apparel*. Retrieved December 28, 2006, from <http://stratigis.ic.gc.ca/epic/site/apparel-vetements.nsf/en/ap03282e.html>
- Strawman, T. (1982). Textile/Costume Department crumples and folds. *The Daily of the University of Washington*. Seattle: University of Washington Library, Special Collections.
- Szabo, L. (1996, July 26). A shrinking industry--Seattle garment workers wonder where they'll fit in as factories close and jobs move elsewhere. *Seattle Times*, p. A1.
- [TC]<sup>2</sup>. (2005a). *The SizeUSA User's Group Meeting--2005*. Retrieved December 16, 2006, from <http://www.tc2.com/what/sizeusa/index.html>
- [TC]<sup>2</sup>. (2005b). *[TC]<sup>2</sup> Turning Research into Reality*. Retrieved December 28, 2006, from <http://www.tc2.com>
- [TC]<sup>2</sup>. (2006). *The Second Annual SizeUSA Users Group Meeting*. Retrieved December 15, 2006, from <http://www.tc2.com/newsletter/arc/071206.html#two>
- Toronto Fashion Incubator. (2006). *Our Story*. Retrieved Dec 2, 2006, from [http://www.fashionincubator.com/about/our\\_story/index.shtml](http://www.fashionincubator.com/about/our_story/index.shtml)
- Toyota Company. (2006). *New model introductions, production, sales, and exports*. Retrieved December 2, 2006, from <http://www.toyota.co.jp/en/history>
- TRIP. (2006). *Key facts about Washington State's Highway System*. Retrieved August 25, 2006, from <http://www.tripnet.org/WashingtonInterstateFactSheet062906.pdf>
- UNITE HERE Local 8. (2005). *Locations*. Retrieved July 27, 2005, from [http://www.unitehere8.org/index.cfm?zone=/unionactive/office\\_locations.cfm](http://www.unitehere8.org/index.cfm?zone=/unionactive/office_locations.cfm)
- Vandermar, D., & Warnick, S. (2006). *Seattle Fashion History Panel*. Retrieved December 13, 2006, from <http://www.seattlechannel.org/videos/watchVideos.asp?program=MOHAI>

- Washington Association of Family and Consumer Sciences. (2005). *About Us*. Retrieved August 4, 2005, from <http://www.wafcs.net/aboutus.htm>
- Washington State Board for Community and Technical Colleges. (2006). *College System History*. Retrieved October 28, 2006, from <http://www.sbctc.ctc.edu/colsyshist.asp>
- Washington State Coordinating Council for Occupational Education. (1971). *Memorandum of Agreement between the Washington State Coordinating Council for Occupational Education and the University of Washington*. Olympia.
- Washington State Department of Community Trade & Economic Development. (2006). *State Awards Economic Development Cluster Grants to Five Regional Partnerships*. Retrieved December 16, 2006, from <http://www.cted.wa.gov/DesktopModules/CTEDNews/CTEDNewsView.aspx?tabID=0&ItemID=114&mid=840>
- Washington State University Pierce County Extension. (2006). *The Sewing and Stitching Expo Story*. Retrieved December 29, 2006, from <http://www.sewexpo.com/expo/story.html>
- Workforce Training and Education Coordinating Board. (2002). *High Skills, High Wages, Washington's Strategic Plan for Workforce Development, Our Agenda for Action*. Olympia, Washington.
- Zumiez. (2006). *Company Profile*. Retrieved October 16, 2006, from <http://phx.corporate-ir.net/phoenix.zhtml?c=188692&p=irol-homeprofile>

## APPENDIX

### Innovative Textile Based Products from Washington

#### *Protective Clothing*

Since the early days of European settlement in the Pacific Northwest, the demands of the harsh environment have stimulated innovation and creativity among workers, adventurers and sports competitors who have often chosen to mitigate the effects of cold, wet and wind with textile based products.

C.C. Filson ® was one of many outfitters for the miners who embarked from Seattle for the Yukon Gold Rush of 1887. Filson's national reputation was built on making rugged clothing for working people like the Mackinaw Cruiser a wool jacket, patented in 1914 and standard issue for the U.S. Forest Service (C.C. Filson Co., 2006; Local Heroes, 2002).

Eddie Bauer, an avid hunter and fisherman, had started as a specialty retailer in 1920. After nearly freezing to death in 1923, Bauer recalled stories from his uncles who had survived the ravages of the winter in the Russo-Japanese war using locally made goose down jackets. Bauer designed his own version of the down jacket and sold them in his catalog at first and then to the military in WWII for flight jackets. After the war the Eddie Bauer ® company used up excess inventory of down sleeping bags to make jackets for the growing ski market (Eddie Bauer, 2006).

Shaun Hughes was in his mid-twenties in 1983 when he started his long battle with skin cancer (Better Nutrition, 2002). In the 1990s when he grew frustrated with clothing made of traditional fabrics which failed to keep his skin protected from UV rays, he collaborated with leading medical experts. The line of comfortable, attractive clothing he invented suited an active life style and also blocked sunlight more than 30 SPF (Hughes, 2006). The clothing and accessories made of tightly woven fabric with UV blocking chemicals were produced locally by Sun Protections in Everett. The clothing called "Solumbra" was used by the cast of *Baywatch* to keep from burning up between shots of the TV series (Enersen, 2006).

Gordon Gerbing applied his skills as a machinist and crafted protective clothing with heating elements that ran off of batteries for employees of his machine shop who

rode to work on motorcycles. When he started to produce his jackets, pants and gloves as a business, Gerbing's Heated Clothing ®, in 1976, he personally sold the gear at motorcycle shows and gatherings. Sales grew as motorcycle engineering allowed ever smaller motors to generate enough electricity to heat the clothing. Gerbing's became the exclusive producer of Harley Davidson ™ heated clothing in 1999. Constant advances in batteries allowed Gerbing to make products for many other activities including hunting golf, and law enforcement (Gerbing's Heated Clothing, 2006).

In 1997 during a rainy hunting season, when Michael McGinley of Rivers West ® grew tired of scaring away the wildlife with the crunching and scraping of his waterproof nylon shell jackets, he designed a waterproof-breathable jacket in a knitted fleece that is warm and very quiet (Rivers West, 2006).

Clothing made by Dutch Harbor Gear for Alaskan fishing fleets and canneries from 1927 was also used by lumberjacks, farmers, ranchers, miners and outdoor sports enthusiasts because of their comfort and affordable pricing (Dutch Harbor Gear, 2006).

### *Head gear*

Barry Barr was frustrated as a young commercial fisherman when his hat would be swept off his head by the fierce winds of the Bering Sea. In 1991, he dreamed up the "Strapcap" with nylon webbing and a sliding clasp. Since 1993, Klear Above, Visibility Unlimited (KAVU) product line expanded to include other clothing items, but Strapcaps still sold over 100,000 per year in 2002 (Local Heroes, 2002).

Outdoor Research ® (OR®) is credited with creating the crushable hat among many other innovative products (Local Heroes, 2002). In the early 1980s when a friend of

Ron Gregg, a physicist and outdoor adventurer, suffered frostbite while skiing on Mt. McKinley, Gregg designed and produced a gaiter that was better at keeping water and ice out of skiing boots (Birkland & Welch, 2003). After Gregg's death in an avalanche in 2003, Dan Nordstrom of the Seattle retailing family, also a dedicated climber, purchased OR. The company continued to lead the way in creating textiles with multiple properties such as wicking and water repellency and with the use of new technologies like seamless assembly (A. Borenstein, personal communication, July 15, 2005).

In the early 1990s, Jan Lawrence made some zany hats for a ski trip with friends and made such a hit that she started selling them as Screamer Hats (Mulady, 2000).

### *Footwear*

Brooks ® Sport, Inc., established in 1914 in Bothell by Morris Goldenberg, made shoes for swimmers (1917), for baseball players (1920), for football players (1930s), then for major teams and athletes (Brooks Sports, Inc., 2006a). Brooks focused on fit, specifically on comfort for the sufferer of hyper-pronation and bone spurs, and on new materials that support the foot and transport moisture (Brooks Sports, Inc., 2006b).

In 1993 Menno van Wyk bought One Sport, a company known for its lightweight hiking and jogging boots, because his ill fitting boots prevented him from enjoying running on mountain trails. Under the new name, Montrail ™, he patented the use of stretch Gore-Tex ® in boots and developed new hybrids, combining boot, gaiter and crampons for water repellency and safety. In 1997 Montrail took 500,000 digital measurements of real women's feet and designed the IntegraFit ™ woman's boot (Turner, 2004).



### *Camping Equipment*

Seattle Quilting invented the down sleeping bag for workers on the Alaska Railroad (1915-23) and continued to make sleeping bags for the outdoor activities market (Seattle Outerwear "Down Filled" Capital, 1970).

In the 1970s Jim Lea, a Boeing engineer and avid weekend hiker, used a sandwich press to construct a light weight, roll up mattress that didn't get cold on the ground. Cascade Designs ®, the company that was formed to produce the "Therm-a-Rest®," followed up with more textile storage systems to hold gear and water packs (Local Heroes, 2002).

In 1973 the Hilleberg family developed the first tent made that offered simultaneous pitching of the inner and outer tent (Hilleberg & Hilleberg, 2006).

### *Packs*

In the 1920s, Floyd Nelson had been hiking around Alaska among newly discovered oil fields and needed a backpack that could carry more than the common sack. He studied Native American packs and built a canvas backpack onto a wooden frame. Charles Trager, who was already producing gloves, aprons and bags for lumberjacks, took on a new invention. The Trapper Nelson ® became standard issue for forest rangers, scouts and campers for decades (Widrig, 2004). The materials of framed packs evolved with the advent of light weight, durable metals and textiles, but the basic design remained the same as Nelson's original.

JanSport ®, started in 1967, by Jan Lewis, Skip Yowell and Murray Pletz invented the ubiquitous half dome camping tent and went on to popularize backpacks for daily use as bookbags for students (JanSport, 2006).

### *Sports*

Glenn B. Getman's and Jensen Schueler's company, Nine Degrees South produced children's golf apparel for the resort market (Getman, 2006).

Ride Snowboards ® became a leading developer of apparel designed just for snowboarding with a definite fashion edge, reflecting the cultural influence of the "board" lifestyle (Ride Snowboards, 2006).

Shoji Onozawa, a lover of mountain biking, designed protective booties and mitten like neoprene covers that protected the hand, and kept it free to work gears on a bicycle (Onozawa, 1998).

Ex Officio was opened in 1987 by Joe Boldan and Rick Hemmerling supplying lightweight nylon poplin shirts with traditional looking shirt collars and lots of places to stash flies, and nylon pants with built in water resistant belts and built in briefs for weekend sports enthusiast who wanted to go from office to the trails and lakes. Hemmerling pioneered several protective finishes including BUZZ OFF™, a fabric treatment that keeps insects from biting (Ex Officio, 2006).

In 1978, in Northgate Mall, Tom Campion created Zumiez ®, now a specialty retailer with national distribution of 174 stores. Campion may have started as a merchant climbing the career ladder at JCPenny (Zumiez, 2006), but his products reflected his understanding of the appeal of risky sports like skate and snow boarding to young men (Zumiez, 2006).

### *Equestrian*

The Cashel Company ® made a line of protective products for horse and rider including the Tush Cushion ®, a pad to cushion a rider's rear developed by Helen and Mel King (Cashel Company, 2006).

Geier Glove Company in Centralia evolved their leather rodeo gloves, first produced in 1927, to insulated gloves with synthetic parts (Geier Glove Co., 2006).

Doug and Stacey Snyder invented the Nimrod Pack Systems, harnesses that held guns or binoculars so that hunters, birdwatchers or forest rangers could have their hands free to while on horseback (Snider, 2006).

### Niche markets

#### *Promotions*

Century 21 Promotions was opened in 1978 to embroider or print logos for advertising purposes while still following fashion trends (Gardner, 2006).

#### *Sustainable textiles and clothing*

Since 1997 Prime has provided clothing and yardage from earth friendly fibers including hemp (Prime Clothing, 2006).

Other categories of innovative products developed in Washington include adaptive clothing, pet supplies, biomedical supplies and more.

## Business methods

It could be said that Washington was an innovator not only of products but also of business methods. A group of climbing enthusiasts started a cooperative in 1939 to buy hard to find specialized equipment. Recreational Equipment Incorporated ® (REI ®), eventually became the largest consumer cooperative in the United States (Long, 2000).

## APPENDIX REFERENCES

- Better Nutrition. (2002). *Bright future: a cancer survivor finds his place in the sun*. Retrieved October 16, 2006, from [http://www.findarticles.com/p/articles/mi\\_m0FKA/is\\_6\\_64/ai\\_86193270](http://www.findarticles.com/p/articles/mi_m0FKA/is_6_64/ai_86193270)
- Birkland, D., & Welch, C. (2003, March 19). 2 skiers from state die in B.C. avalanche. *Seattle Times*, p. B.1.
- Brooks Sports Inc. (2006a). Retrieved October 14, 2006, from [http://en.wikipedia.org/wiki/Brooks\\_Sports%2C\\_Inc](http://en.wikipedia.org/wiki/Brooks_Sports%2C_Inc).
- Brooks Sports, Inc. (2006b). *Who We Are*. Retrieved October 14, 2006, from <http://www.brooksrunning.com/corporate>
- C.C. Filson Co. (2006). *Filson--rugged quality for over 100 years*. Retrieved July 29, 2006, from <http://www.filson.com/corp/index.jsp?page=aboutus>
- Cashel Company. (2006). *About Us*. Retrieved October 14, 2006, from <http://www.cashelcompany.com/aboutus.php>
- Dutch Harbor Gear. (2006). *About Us*. Retrieved October 14, 2006, from <http://www.dutchharborgear.com/t-about.aspx>
- Eddie Bauer. (2006). *Our Company Historical Timeline*. Retrieved July 29, 2006, from [http://www.eddiebauer.com/about/company\\_info/history.asp](http://www.eddiebauer.com/about/company_info/history.asp)
- Enersen, J. (2006). *Seattle-area man's products keep people protected from sun*. Retrieved December 16, 2006, from [http://www.king5.com/health/specials/stories/NW\\_062705HEKskin\\_sunprecautionsSW.35a2a03f.html](http://www.king5.com/health/specials/stories/NW_062705HEKskin_sunprecautionsSW.35a2a03f.html)
- Ex Officio. (2006). *Big Ideas for a Big Planet*. Retrieved October 15, 2006, from <http://exofficio.com/content/aboutexo/loadcontent.aspx?id=1>

- Gardner, M. (2006). *fashionable summer forecast*. Retrieved October 14, 2006, from [http://www.corporatelogo.com/articles/products/616\\_061feat2.html](http://www.corporatelogo.com/articles/products/616_061feat2.html)
- Geier Glove Co. (2006). *About*. Retrieved October 14, 2006, from <http://www.geierglove.com:8080/about.html>
- Gerbing's Heated Clothing. (2006). *History*. Retrieved October 14, 2006, from <http://www.gerbing.com/info/history.html>
- Getman, G., & Schueler, J. (2006). *A Profile of Nine Degrees South, Inc (NDS)*. Retrieved October 14, 2006, from [http://www.9dsouth.com/about\\_us.htm](http://www.9dsouth.com/about_us.htm)
- Hilleberg, B., & Hilleberg R. (2006). *Hilleberg the tent maker*. Retrieved October 14, 2006, from <http://www.hilleberg.com/AboutUs.htm>
- Hughes, S. (2006). *Sun Precautions: About Us*. Retrieved October 14, 2006, from [http://www.sunprecautions.com/cgi-bin/sgdynamo.exe?HTNAME=\\_tour\\_1.htm&UID=2006101415285189](http://www.sunprecautions.com/cgi-bin/sgdynamo.exe?HTNAME=_tour_1.htm&UID=2006101415285189)
- infomat.net. (2006). *JanSport*. Retrieved October 14, 2006, from <http://www.infomat.net/infomat/rd741/rd1/database/jansport/index.asp>
- Local Heroes. (2002, November 20). Retrieved October 13, 2006, from <http://www.seattleweekly.com/news/0247/features-staff.php>
- Long, P. (2000). *REI (Recreational Equipment Inc.) opens in Seattle in 1939: HistoryLink.org Essay 2904*. Retrieved July 29, 2006, from [http://www.historylink.org/essays/output.cfm?file\\_id=2904](http://www.historylink.org/essays/output.cfm?file_id=2904)
- Mulady, K. (2000, November 3). Skiers just love those hats that giggle: What started as a lark is now a booming business with annual sales of almost \$1 million. *Seattle Post-Intelligencer*, p. D1.
- Onozawa, S. (1998). *Fall is here!* Retrieved October 16, 2006, from [http://www.sidetrak.com/eng\\_title.html](http://www.sidetrak.com/eng_title.html)
- Prime Clothing. (2006). *Home*. Retrieved October 14, 2006, from <http://www.primeclothing.net/index.html>
- Ride Snowboards. (2006). *Outerwear*. Retrieved October 14, 2006, from <http://www.ridesnowboards.com/softgoods/default.asp?IntroID=8,9,10,11,12>
- Rivers West. (2006). *A Word from Our Founder*. Retrieved October 14, 2006, from <http://www.riverswest.com/hifi.html>

Seattle Outerwear "Down Filled" Capital. (1970, February 12). *Seattle Times*. Seattle Public Library, Washington Company File.

Snider, D. (2006). *Welcome to the land of Nimrod*. Retrieved October 14, 2006, from <http://nimrodpacks.com/about.html>

Turner, B. (2004). *Montrail Backgrounder*. Retrieved October 16, 2006, from [http://www.magmagroup.it/mgm\\_area\\_51/pdf/Montrail\\_Backgrounder.pdf](http://www.magmagroup.it/mgm_area_51/pdf/Montrail_Backgrounder.pdf)

Widrig, C. D. (2004). *A Brief History of How Backpacking Got It's Name*. Retrieved August 1, 2006, from [http://tragerusa.com/look\\_body.html](http://tragerusa.com/look_body.html)

Zumiez. (2006). *Company Profile*. Retrieved October 16, 2006, from <http://phx.corporate-ir.net/phoenix.zhtml?c=188692&p=irol-homeprofile>