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Women's functional swimwear, 1860-1920

by

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in partial fulfillment of the requirements for the degree of**

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Major: Textiles and Clothing

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CHAPTER 1

INTRODUCTION

Thus times do shift, each thing his turn does hold;
New things succeed, as former things grow old.

-Robert Herrick

Through the years scholars have attempted to explain shifting styles¹ or tastes in human creations or possessions. Some have gained insight into stylistic change found in art, architecture, and other cultural manifestations by investigating dress or costumes.² The fashion “theories” tested in these investigations describe past fashion movement but cannot accurately foretell future change.³ In an attempt to understand the rationale for stylistic change, I have traced the origin and development of American women's “functional swimwear” from the 1860s to 1920.

During the last half of the 19th century, bathing garments were of two types: fashionable costumes worn in or near the water and functional garments that facilitated active swimming. The former was referred to as a “bathing” costume, dress or suit; it was

¹ When discussing dress or apparel, “style” refers to the specific characteristics of a garment including cut, fabric, color, and any decorative features.

² See A. L. Kroeber, “On the Principle of Order in Civilization as Exemplified by Changes of Fashion,” American Anthropologist 21 (1919): 235-263; William H. Reynolds, “Cars and Clothing: Understanding Fashion Trends,” Journal of Marketing 32 (1968): 44-49; Dwight W. Robinson, “Fashion Theory and Product Design” Harvard Business Review 36 (November/December 1958): 121-131; Dwight W. Robinson, “Fashions in Shaving and Trimming of the Beard: The Men of the Illustrated London News,” American Journal of Sociology 81 (1976): 1133-1139.

³ See George Sproles, “Behavioral Science Theories of Fashion,” in The Psychology of Fashion, ed. Michael R. Solomon (Lexington MA: Lexington Books, 1985), 55-69.

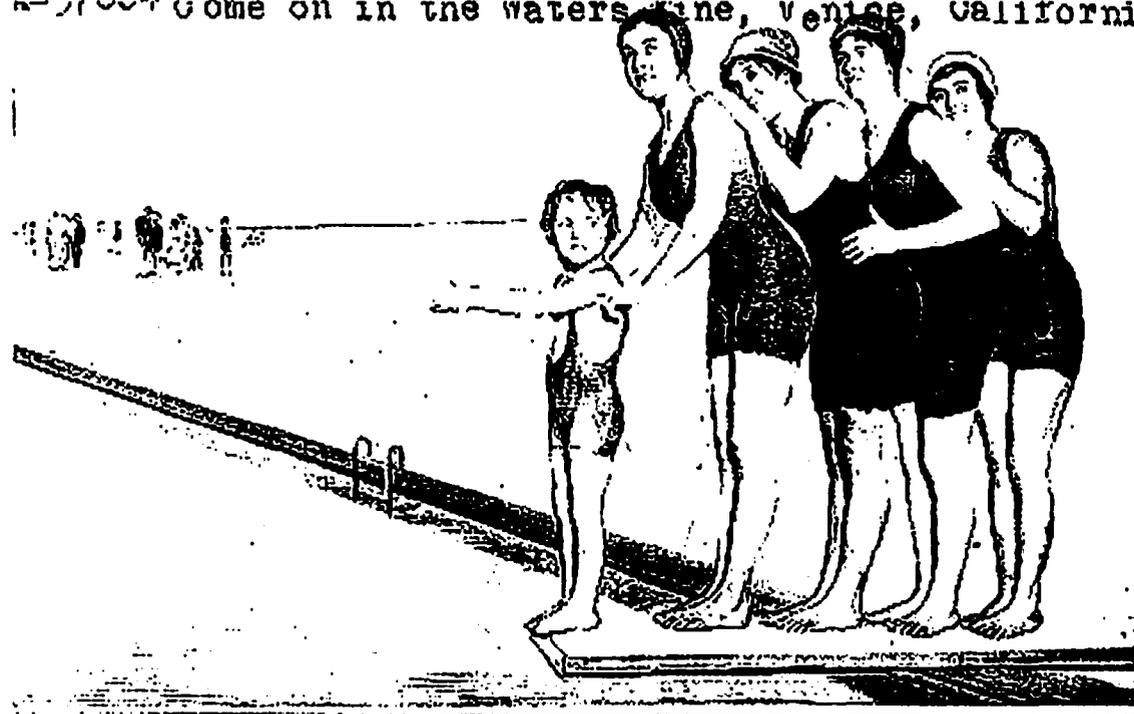
a simplified version of the outerwear styles of the era , including its fabrics and major features. Functional garments, called swimming suits or, in today's lexicon, swimwear, incorporated the fabrics of the era but did not necessarily include the stylistic details of fashionable outerwear.⁴ However, they had to conform to the prevailing standards of health and decency. Over time, the garments became briefer and lighter as women increasingly became more actively engaged in swimming for exercise and safety.

Using illustrations and information from women's periodicals, I initially documented the general stylistic changes in bathing attire between 1850 and 1900. For the years after 1900, I used data from catalogs, post cards, newspapers, photographs, and extant garments. The data indicated that bathing costumes followed the dominant outerwear silhouette of the era. Thus, it was not surprising that by 1915, the most popular style of women's bathing attire was a simple, tubular knit garment called the "tank suit" (see Figure 1).⁵ However, visual data from the above sources gave the impression that men and children adopted functional styles several decades earlier than women. Descriptive data offered a different interpretation: some women had adopted practical swim garments as early as men and children, but in a less visible and more specific manner. Early adopters and conditions which led them to adopt functional swimwear is the framework of my dissertation.

⁴ Claudia B. Kidwell, Women's Bathing and Swimming Costume in the United States, (Washington, DC: Smithsonian Institution Press, 1968), 24.

⁵ The Curt Teich Postcard Archives, Lake County Museum, Wauconda, Illinois, #A57864, 1915.

...come on in the waters here, Venice, California



A57864 1915

Figure 1. Postcard #A57864, 1915. The Curt Teich Postcard Archives.

As industrialization spread in the late 19th century, it altered life in America in many ways. Medicine, employment, education, leisure, travel and housing were some of the areas affected when machines increasingly and more efficiently supplanted the labor of humans and beasts. Those who migrated to the cities for employment in factories, stores, or service organizations experienced significant life-style changes. The young, unmarried found greater personal freedom as well as greater responsibility for their own well-being. Those without friends or family lived in boarding houses or facilities established by civic, religious, or reform groups.⁶ Social arbiters felt uneasy about the young people's growing independence in moral, religious, financial, and educational matters. Some businesses as well as women's organizations took special interest in protecting young women from the "evils" of the city.⁷ Others felt compelled to "Americanize" the huge number of newly arrived immigrants.⁸ The fear of disease or "immoral" ideas spreading to their families may have motivated some. By the 1860s and

⁶ See Dorothy Richardson, The Long Day: The Story of a New York Working Girl. With an introduction by Cindy Sondik Aron, (New York: Century Co., 1905; Charlottesville: University Press of Virginia, 1990); Susan A. Glenn, Daughters of the Shtetl: Life and Labor in the Immigrant Generation (Ithaca, New York: Cornell University Press, 1990).

⁷ Olivier Zunz, Making America Corporate (Chicago: University of Chicago Press, 1990), 116-121, 138-144; Boris Emmet and John E. Jeuck, Catalogues and Counters: A History of Sears, Roebuck and Company (Chicago: University of Chicago Press, 1950), 11.

⁸ New York Times, November 21, 1910, 8; See Barbara A. Schreier, Becoming American Women: Clothing and the Jewish Immigrant Experience, 1880-1920. Catalog of an exhibition held at the Chicago Historical Society, 1994.

1870s civic organizations were established to aid, monitor, or educate the “disadvantaged” newcomers. The YMCA, YWCA, and other groups offered housing, meals, recreation, educational opportunities as well as moral and religious guidance.⁹

No longer tied to a farming schedule based on the changing seasons, Americans increasingly engaged in summer recreational activities after the mid 19th century. While urban dwellers of modest means may have spent a day at the beach or park, those of greater means traveled by railroad or waterways to lakes, fashionable “watering-places” and foreign lands. As railroad travel became more extensive and affordable, the working class also went to the resorts where they met and mingled with people from diverse areas of the country. The relaxation of manners, customs and dress had a democratizing effect; rigid class distinctions based on appearance and deportment became blurred.¹⁰

Experts in medicine and education increasingly encouraged women to exercise and engage in mild recreations. While some warned that women’s reproductive function might be compromised if the activities were too vigorous, there was general agreement that women would be healthier if they participated in modest activities such as

⁹ See Anne Firor Scott, Natural Allies: Women’s Associations in American History (Chicago: University of Illinois Press, 1991); Chicago Tribune, June 7, 1879, 3; New York Times, August 4, 1885, 8; June 22, 1912, 10; June 30, 1912, 13; August 9, 1912, 16.

¹⁰ Lois Banner, American Beauty (Chicago: University of Chicago Press, 1983), 68-69, 78-81, 265-266; Good Housekeeping, October 1897, 177; New York Times, August 7, 1910, section 6, 2.

swimming. Furthermore, swimming was a valuable skill in the event of an accident during water transport or leisure activities.¹¹

Death by drowning was a common occurrence.¹² Greater affluence brought more opportunity for travel and leisure activities as well as greater possibilities of drowning. Since safety regulations were non-existent or treated with indifference, accidents frequently occurred in, on, or near bodies of water. Needless deaths occurred because of fear and panic, especially when water crafts or ships collided or sank..

Newspapers urged readers to learn to swim for self-protection. Staying calm and knowing how to float increased one's chance of survival. During "the drowning season," stories of deaths and rescues were common. Women, the "weaker sex," could and did save lives. These "remarkable feats" may have encouraged others to learn to swim.¹³

As machines assumed greater responsibility for labor, there appeared to be an increased interest in demonstrations of human physical prowess.¹⁴ Long-distance male

¹¹ Chicago Tribune, August 30, 1875, 7; Godey's Lady's Book, August 1858, 123-25; June 1860, 493-97; Harper's Bazar, August 1912, 380; New York Times, July 6, 1880, 1; July 15, 1912, 3; Peterson's Magazine, October 1855, 245.

¹² Chicago Tribune, July 3, 1874, 3; New York Times, July 14, 1868, 4; August 20, 1872, 4; April 3, 1873, 4.

¹³ Chicago Tribune, September 6, 1870; September 4, 1871; New York Times, July 14, 1868, 4; 8; July 19, 1868, 4; June 28, 1872, 4; August 20, 1872, 4; April 3, 1873, 4; May 31, 1873, 12; October 18, 1874, 5; July 20, 1875, 4; November 26, 1876, 4; July 2, 1898, 4.

¹⁴ New York Times, May 26, 1879, 1; Chicago Tribune, May 4, 1879, 11; June 16, 1879, 8; June 18, 1879, 5.

and female swimmers became international celebrities who gave exhibitions, lessons, and wrote books. Women, assumed to be inherently weaker than men, aroused great interest by their accomplishments. During these exhibitions, costumes which allowed freedom of movement were deemed acceptable although not sanctioned for public wear.

Women had expressed dissatisfaction with the usual bathing costumes in the late 1860s. Those who swam in deep water wanted lighter garments which also allowed greater freedom of movement. In spite of the prevailing concerns for modesty and health, women adopted “appropriate” swimming apparel for teaching, competitions, exhibitions, or swimming in deep water. The garments were not fashionable; thus, they rarely appeared in American illustrations, photographs or advertisements of the era. However, being different from the ideal or socially accepted fashions of the day, they were newsworthy and received coverage in the newspapers.

By the new century, women increasingly swam in high school, collegiate programs and, ultimately, the Olympics. Their increased participation might seem to have been the greatest impetus for the adoption of women’s functional swimwear. However, the United States Olympic Committee did not allow women to participate in swimming events until 1920.¹⁵ By then, many women had already adopted functional swimwear. It might also seem that women’s greater social and political freedom might have influenced its adoption. Certainly, as women participated more fully in all facets of American life, they did wear more functional clothing. This was particularly true during

¹⁵The Associated Press and Grolier, Pursuit of Excellence: The Olympic Story (Grolier Enterprises, Inc. Danbury, Connecticut, 1979), 81.

World War I, when women ably substituted for men in various occupations. All of these factors undoubtedly aided the general acceptance of women's right to wear more functional swimwear.¹⁶ However, I suggest that the adoption of women's functional swimwear had a more humble and much earlier beginning.

When industrialization caused a large influx of immigrants and rural people to the U.S. cities, a crisis in personal hygiene and sanitation occurred. Only the upper classes had convenient access to water or home-bathing facilities.¹⁷ To the consternation of many, men and boys bathed nude in any available body of water.¹⁸ Women did not have this option. Medical professionals proposed European-style public bathing facilities for the lower classes or "the great unwashed."¹⁹ The first public baths were built in New York in 1852. As competition between American cities grew, bathing facilities were deemed one of the hallmarks of a well-run city. Major cities established some form of public bathing facilities by 1870s, although many were open only during the summer.²⁰

¹⁶ Susan Kaiser, The Social Psychology of Clothing: Symbolic Appearances in Context, 2nd ed. (New York: Macmillan Publishing Company, 1990), 503.

¹⁷ New York Times, June 29, 1868, 5; Chicago Tribune, June 23, 1870; June 27, 1874, 5.

¹⁸ New York Times, July 12, 1868, 4; May 27, 1873, 4; June 27, 1874, 5; Marilyn T. Williams, Washing "the Great Unwashed": Public Baths in Urban American, 1840-1920 (Ohio State University Press, 1991), 29.

¹⁹ New York Times, June 22, 1871, 8; Williams, Washing "the Great Unwashed," 6.

²⁰ Williams, Washing "The Great Unwashed," 10-21, 28, 55.

Female “superintendents,” all excellent swimmers, supervised the women’s bathing facilities. They encouraged and taught swimming to thousands of school girls, homemakers, and working women who regularly attended the baths. Participants were required to wear simple, one-piece garment which would not hinder the movement of arms and legs.²¹ Bathhouses, both public and private, scheduled competitions to generate publicity. Male bath owners and swimmers often tutored and encouraged their female relatives.²² They also may have encouraged women to wear simplified garments to improve their performance.

Many factors led to the general adoption of women’s functional swimwear. By 1915, it had become fashionable. At approximately the same time, attendance at public baths had decreased; most private homes had bathing facilities. I believe the two developments were related. I have concluded that the public bath movement, whereby thousands of women in the United States learned to swim, was the greatest influence on the adoption of functional swimwear. Women, who learn to swim at public baths in functional swimwear, may have stopped going to the baths, but they continued to wear the comfortable, utilitarian garments.

²¹ Chicago Tribune, July 8, 1877, 11.

²² New York Times, August 11, 1872, 8; July 27, 1873, 5; September 7, 1873, 8; July 10, 1874, 5; August 31, 1874, 8; August 26, 1875, 2; Sept 18, 1875, 10.

CHAPTER 2

FASHION THEORY

To understand the significance of my study, it is helpful to review some of the major fashion theories. Fashion is generally defined as “the style accepted by the majority of a group at a particular time and place.”²³ Theories emanating from anthropology, art, communications, economics, geography, history, psychology, sociology, business and marketing attempt to explain the fashion process. George Sproles organized these diverse theories into one body which he hoped would facilitate the development of a general, integrative, explanatory and testable model.²⁴ His conceptual framework recognized six basic stages through which a given style passes: (1) invention and introduction; (2) minimal adoption; (3) increased adoption; (4) widespread adoption; (5) saturation or overuse; and (6) decline and obsolescence.²⁵

There is little disagreement that a given style goes through these or similar stages,

²³ Elizabeth D. Lowe and John W. G. Lowe, “Quantitative Analysis of Women’s Dress,” in The Psychology of Fashion, ed. Michael R. Solomon (Lexington, Massachusetts: Lexington Books, 1985), 193.

²⁴ See Sproles, “Behavioral Science Theories of Fashion,” 55-69; George B. Sproles, “Analyzing Fashion Life Cycles-Principles and Perspectives,” Journal of Marketing 45 (Fall 1981): 116-124.

²⁵ Some styles never reach the obsolescence stage; instead they become “classics” or fashion staples with minimal change from year to year.

but the rationale for its movement through each stage is open to various interpretations.²⁶

Fashion theorists usually fall into two major groups: 1) those who believe that stylistic change is controlled by endogenous or internal forces in a form of relatively predictable cycles; and 2) those who believe the process is controlled by exogenous or outside forces.²⁷

Endogenous theorists see fashion change as slow, continuous, cyclical, and evolutionary; basic components of a style or silhouette move back and forth between extremes and sometimes oscillate for a while, before continuing on their predetermined paths.²⁸ While there is a degree of predictability in the process, no one can foretell the timing or duration of a cycle. A. L. Kroeber was the first to test the endogenous theory. Subsequent researchers confirmed the cyclical nature of stylistic change but disagreed on the length and nature of the cycles as well as the impact of modern media and

²⁶ Sproles, "Behavioral Science Theories of Fashion," 56-57; Fred Davis, Fashion, Culture, and Identity (Chicago: University of Chicago Press, 1992), 103-108.

²⁷ See John W. G. Lowe and Elizabeth D. Lowe, "Cultural Pattern and Process: A Study of Stylistic Change in Women's Dress." American Anthropologist 84 (September 1982): 521-544; Christopher M. Miller, Shelby H. McIntyre, and Murali K. Mantrala, "Toward Formalizing Fashion Theory," Journal of Marketing Research 30 (May 1993): 142-157.

²⁸ Sproles, "Behavioral Science Theories of Fashion," 62.

technology.²⁹ Some suggested pluralism or the reintroduction of former styles when extreme change was imminent.³⁰ This supported Kroeber's belief that oscillation occurred before accepting an acute, opposing stylistic direction.³¹ Evolution of new styles from previous ones was also noted.³² Some researchers found exogenous forces such as median age, disposable income, government restrictions, and other factors affected styles.³³ They

²⁹ See Kroeber, "On the Principle of Order in Civilization as Exemplified by Changes of Fashion;" Paul H. Nystrom, The Economics of Fashion (New York: The Ronald Press, 1928); Agnes Young, Recurring Cycles of Fashion, 1760-1937 (New York: Harper & Brothers, 1937); Jane Richardson and A. L. Kroeber, "Three Centuries of Women's Dress Fashions; A Quantitative Analysis," Anthropological Records 5 (1940): 111-153; Robinson, "Fashions in Shaving;" Patricia Weeden, "Study Pattern on Kroeber's Investigation of Style," Dress 3 (1977): 9-19; Sarah Peabody Turnbaugh, "The Seriation of Fashion," Home Economics Research Journal 7 (1979): 241-248; Lynne Richards, "The Rise and Fall of It All: The Hemlines and Hipline of the 1920s," Clothing and Textiles Research Journal 2 (1983-84): 42-48; Bonnie D. Belleau, "Cyclical Fashion Movement: Women's Day Dresses: 1860-1980," Clothing and Textiles Research Journal 5 (1987): 15-20; Lowe and Lowe, "Quantitative Analysis of Women's Dress;" Lowe and Lowe, "Cultural Pattern and Process;" John W. G. Lowe and Elizabeth D. Lowe, "Velocity of the Fashion Process in Women's Formal Evening Dress, 1789-1980," Clothing and Textiles Research Journal 9 (1990): 50-58.

³⁰ See Weeden, "Study Pattern on Kroeber's Investigation of Style."

³¹ See Richardson and Kroeber, "Three Centuries of Women's Dress Fashions."

³² See Turnbaugh, "The Seriation of Fashion."

³³ Dorothy Behling, "Fashion Change and Demographics: A Model," Clothing and Textiles Research Journal 4 (1985-86): 18-24; Lowe and Lowe, "Quantitative Analysis of Women's Dress," 205; Carol Robestine and Eleanor Kelly, "Relating Fashion Change to Social Change: A Methodological Approach," Home Economics Research Journal 10 (1981): 78-87; See Young, Recurring Cycles of Fashion.

noted that discord might stall the fashion process but, once the crisis was over, its internal force placed it back on its cyclical path.³⁴

Exogenous theorists suggest that fashion change is controlled by social, economic, political, religious, intellectual, and technological forces which individuals, groups or collective society may wield. An often-cited source of change has been the upper-class who continually adopted new styles to differentiate themselves from the rest of society.³⁵ Economists explain this “trickle-down” phenomenon in terms of “supply and demand” which assigns higher prices and social status to rare or scarce items.³⁶

Another perspective suggests fashion adoption is collective behavior, social conformity, or mass movement that spreads or “trickles-across” the entire society.³⁷ In this interpretation, a “collective selection” process limits the choice of styles and makes

³⁴ Lowe and Lowe, “Cultural Pattern and Process,” 538 ; Nystrom, The Economics of Fashion, 21; Richardson and Kroeber, “Three Centuries of Women's Dress Fashions,” 149.

³⁵ See Thorstein Veblen, Theory of the Leisure Class (1899; reprint, New York: Penguin Books, 1979); George Simmel, “Fashion,” American Journal of Sociology 62 (May 1957): 541-558 (reprint of 1904 publication).

³⁶ Nystrom, The Economics of Fashion, 96-104; Dwight W. Robinson, “The Economics of Fashion Demand,” Quarterly Journal of Economics 75 (August 1961): 376-398.

³⁷ See Herbert Blumer, “Fashion: From Class Differentiation to Collective Selection,” Sociological Quarterly (Summer 1969): 275-291; Charles W. King, “Fashion Adoption: A Rebuttal to the ‘Trickle Down’ Theory,” in Toward Scientific Marketing, ed. Stephen A. Greyser, (Chicago: American Marketing Association, 1963), 108-125.

them available to all levels of society simultaneously.³⁸ Somewhat related is the “conspiracy” theory, which claims that the apparel industry controls the fashion process; “gatekeepers” or “professional change agents” such as designers, retailers buyers, fashion leaders, and the media steer consumers toward pre-selected items.³⁹

In recent decades, a new theory suggests that fashion is “polymorphous and pluralistic,” not monolithic.⁴⁰ This perspective acknowledges that fashion change occurs often, diffuses readily, and is subject to global influences. Many styles or silhouettes may be simultaneously “fashionable” or appropriate depending on the time, place, and mood of the wearer and observer; clothing has multiple and conflicting meanings which may require interpretation.⁴¹ Various social-psychological motives may induce individuals to create or adopt innovative dress: individuality, conformity, escape, excitement, rebellion,

³⁸ Blumer, “Fashion,” 281-282; Davis, Fashion, Culture, and Identity, 118; Kaiser, Social Psychology of Clothing, 491-493.

³⁹ Sproles, “Behavioral Science Theories of Fashion,” 64; Sproles, “Analyzing Fashion Life Cycles,” 118; Kaiser, The Social Psychology of Clothing, 482, 502.

⁴⁰ Davis, Fashion, Culture, and Identity, 155; Susan B. Kaiser, Richard H. Nagasawa and Sandra S. Hutton, “Fashion, Postmodernity and Personal Appearance: A Symbolic Interactionist Formulation,” Symbolic Interaction 14, no. 2 (1991): 165-185; Kaiser, The Social Psychology of Clothing, 503-515.

⁴¹ Davis, Fashion, Culture, and Identity, 3-18, 21-29; Fred Davis, “Clothing and Fashion as Communication,” in The Psychology of Fashion, ed. Michael R. Solomon, Lexington MA: Lexington Books, 1985, 15-27; Kaiser, The Social Psychology of Clothing, 509-513.

and sexual enticement.⁴² Tension between dichotomies can also generate new styles.⁴³ Subcultures such as teenagers, musicians, or minorities may create or introduce styles which “trickle-up” to the majority of society.⁴⁴ Unique or highly visible individuals or groups may provide “visual display and initial exposure” of a new style, but that does not guarantee immediate approval or adoption.⁴⁵ Only when the style is “culturally legitimized” or accepted by the fashion industry does it flow to the rest of society.⁴⁶

These are but a few of many theories that attempt to explain stylistic change. Sproles and others believe a general, testable fashion theory can be developed if it recognizes both endogenous and exogenous forces.⁴⁷ The cyclic nature of styles or silhouettes has been verified, but a greater enigma is the impact of outside forces on this movement. Sproles recommended historical research to examine the influence of specific forces on stylistic change.⁴⁸ This is not unlike “environmental scanning,” a

⁴² Kaiser, The Social Psychology of Clothing, 488; Sproles, “Behavioral Science Theories of Fashion,” 58-59.

⁴³ Kaiser, The Social Psychology of Clothing, 488; See Behling, “Fashion Change and Demographics.”

⁴⁴ Sproles, “Behavioral Science Theories of Fashion,” 60.

⁴⁵ Kaiser, The Social Psychology of Clothing, 493.

⁴⁶ Kaiser, The Social Psychology of Clothing, 503-504.

⁴⁷ Sproles, “Behavioral Science Theories of Fashion,” 66-67; Lowe and Lowe, “Quantitative Analysis of Women's Dress,” 204-205.

⁴⁸ Sproles, “Analyzing Fashion Life Cycles,” 122.

marketing technique which assesses external forces to understand product demand.⁴⁹

Others have documented the general stylistic change in bathing garments over time.⁵⁰ The Sears' catalogs from 1900 through 1930 confirmed the general adoption of the functional, knitted "tank suit."⁵¹ While the 1915 catalog featured only bathing costumes, by 1917 the catalog featured both bathing and swimming garments; catalogs of the 1920 underscored the general adoption and popularity of functional swimwear by featuring it exclusively. My challenge was to define the origin of women's functional swimwear and factors that influenced its movement into the fashion cycle.

⁴⁹ Eric N. Berkowitz, Roger A. Kerin, and William Ruelius, Marketing (Homewood, Illinois: Irwin, 1989), 57-83.

⁵⁰ See Blanche Payne, Geitel Winakor, and Jane Farrell-Beck, The History of Costume, 2nd ed. (New York: Harper Collins, 1992); Kidwell, Women's Bathing Costume, 30.

⁵¹ Sears Roebuck and Company Catalog, #120-160.

CHAPTER 3

DISCUSSION OF DATA SOURCES

The primary goal of my dissertation was to search for factors that influenced the development and adoption of women's functional swimwear and to discover when this occurred. Initially, I documented general stylistic change in women's bathing costume by perusing women's periodicals between the 1840s and 1930s. Illustrations and information in Godey's Lady's Book, Harper's Bazar,⁵² Peterson's Ladies' National Magazine, and The Delineator allowed me to identify the ideal, socially acceptable, or fashionable bathing costumes for the 1860s through the 1930s. The Sears Roebuck and Company Catalogs, the Montgomery Ward Catalogs, and two pages from the A.G. Spalding's 1904 Spring and Summer Sports Catalog provided insight into the most widely purchased bathing garments from the late 1890s through 1930s. The Curt Teich Postcard Archives at the Lake County Museum, Wauconda, Illinois, provided visual documentation of bathing garments worn between approximately 1900 and the 1930s.

Extant garments at the Chicago Historical Society and The DuPage Historical Society defined some of the physical characteristics of bathing attire (see Appendix A). Few were dated earlier than 1915; most were from the 1920s and 1930s. The oldest extant functional swimwear examined was a denim suit that belonged to a 1900 Radcliffe College alumna. I did not seek out additional extant collegiate swimwear although this

⁵² The spelling of Bazar changed to Bazaar in 1929.

would be another source of data. A patent search helped me identify problems associated with bathing garments as well as become knowledgeable on knit technology (see Appendix B). It also provided information on swimming devices and life preservers (see Appendix C).

Photographs located in the archives at The Chicago Historical Society, Milwaukee Historical Society, DuPage Historical Society, The City of Chicago Park District, The Harold Washington Public Library, and The Arthur Schlesinger Library were interesting, but dates and subjects were difficult to substantiate. The most informative photographs came from personal collections; they offered specific dates, locations, and identity of subjects.

Bathing garments that did not conform to the ideal or socially acceptable style were newsworthy. Therefore, significant information was obtained from articles, editorials, illustrations, and advertisements found on microfilmed editions of the Chicago Tribune and New York Times. Locating articles in the New York Times from 1863 to 1920s was facilitated by the New York Times Index. No similar index existed for the early editions of the Chicago Tribune; thus I reviewed editions of the newspaper published between late June and mid-September from 1864 to 1880. Other journals and secondary sources provided data on women's education, organizations, public bathing, and organized swim programs. Before 1910, American publications seldom showed pictures or illustrations of women in body-revealing garments. Finally, I searched World Wide Web sites for photographs and data related to public baths, resorts, swimming, and the Young Women's Christian Association.

I chose to use several data sources because I recognized that each had its own peculiar bias. While the women's periodicals offered significant data on bathing costumes and swimwear, the data were biased toward the middle and upper classes. The editors served as "gatekeepers" who withheld styles or information which did not comply with their idea of propriety. Catalogs offered information on the most popular garments; when the styles were no longer financially rewarding to the companies, they ceased to be included. Additionally, they provided no information on the origin or innovative stage of functional swimwear. The postcard collection yielded data on public swimming pools as well as swimwear worn by ordinary women. It, too, had limitations: few postcards were dated before 1910.

Extant costumes allowed me to see fabrics and designs utilized in bathing attire. However, extant garments are never completely representative; examples of all styles did not endure. This would be particularly true of functional swimwear, which would have been consumed rather than saved for posterity. Additionally, pools contained chemicals that caused fabrics to deteriorate; it is doubtful that many garments have survived.

When I searched for indexed references to bathing, swimming, and women's athletics in the New York Times, I found relevant articles on early female swimmers and public bathhouses. Once the dates were established, I searched for similar articles in the Chicago Tribune. Fortunately for the field of costume history, mid-western correspondents included descriptions of swimming garments. It is unknown what other regional or ethnic newspaper reporters may have included in their coverage. The selected patents of new and improved knit products and life-preservers gave insight into fears

related to body exposure and drowning as well as specific technological capabilities. However, not all patents became usable or salable products. Well-documented family photographs can be a valuable data source. However, locating a significant and representative sample is difficult, especially if photographs depicted women in socially questionable dress.

The combined data helped correct the biases of the individual sources. Additional data from regional or ethnic newspapers, diaries, and personal photograph collections would be helpful in corroborating and strengthening my findings.

CHAPTER 4

INDUSTRIALIZATION AND CHANGING LIFE STYLES, 1850-1930

Significant demographic changes occurred in the United States between 1850 and 1930.⁵³ Not only did the population increase nearly 500%, but its composition also changed from predominantly rural (85%) in 1850 to more than half urban (52%) by 1920. Massive waves of immigration increased the percentage of foreign-born from approximately 10% to more than 14% of the total population (See Appendix D). New York City's population increased more than two-and-a half times between 1845 and 1854, primarily from the large number of Irish immigrants. Likewise, the population of Philadelphia and Boston doubled during the same period for the same reason.⁵⁴

While farm employment increased from 4.9 million in 1850 to 10.5 million in 1930, by the latter date it represented a much smaller percentage of total employment⁵⁵ As the percentage of the total population engaged in farm employment went down, employment in manufacturing, trade, transportation, services and government increased.⁵⁶ These changes had a significant impact on the living and working conditions in the cities that were flooded with the newcomers. New forms of employment in

⁵³ Ben Wattenberg, ed., Statistical History of the United States from Colonial Times to the Present (New York: Basic Books, 1976), 134; Chicago Tribune, July 7, 1880, 7.

⁵⁴ Williams, Washing "The Great Unwashed," 6.

⁵⁵ Wattenberg, Statistical History, 134; Emmet and Jeuck, Catalogues and Counters, 11.

⁵⁶ Wattenberg, Statistical History, 240.

factories, offices, stores, and service organizations required new forms of education. As late as 1870, 20% of the population was illiterate. By 1930 illiteracy had dropped to 4.3%.⁵⁷ School enrollment went up from 47% in 1850 to approximately 70% in 1930, with negligible difference between the sexes by the second date.⁵⁸ Millions read newspapers and magazines; thus, ideas on fashions and health diffused quickly. Urbanization and the growth of corporations led to new consumption patterns.⁵⁹

Growth in the United States affected its status among the rest of the world. By the late 1880s Great Britain, Germany, France, Japan and Russia recognized the United States as a rival.⁶⁰ Heretofore, world power had been determined by military strength and diplomatic influence. The United States' supremacy was based on its industrial, agricultural, and economic growth which appeared unstoppable.⁶¹

By 1907 there were over one million miles of passenger railroads.⁶² National identity and patriotism grew as the United States utilized its rich lands and raw materials

⁵⁷ Wattenberg, Statistical History, 382.

⁵⁸ Wattenberg, Statistical History, 370.

⁵⁹ Daniel J. Boorstin, The Americans: The Democratic Experience (New York: Vintage Books, 1974), 89-157; Paul Kennedy, "The Rise of the United States to Great-Power Status," in Imperial Surge: The United States Abroad, the 1890s-Early 1900s, eds. Thomas G. Paterson and Stephen G. Rabe (Lexington, Massachusetts: D. C. Heath and Company, 1992), 10, 14.

⁶⁰ Kennedy, "The Rise of the United States," 3-14.

⁶¹ Kennedy, "The Rise of the United States," 6, 14.

⁶² Wattenberg, Statistical History, 731.

with the help of improved technology and plentiful labor.⁶³ Millions sought new lives in the “New World” which appeared to have fewer “social or geographic constraints.”⁶⁴ As the economy of the United States grew, so did European animosity; many countries wanted restrictions placed on cheap U.S. imports.⁶⁵ They objected to “unfair” trade practices, the “Americanization of the world” and the flow of their money to the United States.⁶⁶ The competition for supremacy was apparent even in the supposedly “non-political” reintroduction of the Olympic games.

The United States believed it had a moral endorsement from God to lead the world.⁶⁷ In spite of this conviction, they found it prudent to allocate more funds to military defense when a growing distrust of foreign powers surfaced.⁶⁸ Immigrant labor was necessary for growth, but blatant loyalty to former homelands was generally discouraged. Most immigrants readily assimilated by adopting American leisure and

⁶³ Kennedy, “The Rise of the United States,” 8, 11-12; Chicago Tribune, August 27, 1880, 8; New York Times, June 28, 1912, 11; September 6, 1912, 8.

⁶⁴ Kennedy, “The Rise of the United States,” 8, 9.

⁶⁵ Kennedy, “The Rise of the United States,” 10-11.

⁶⁶ Kennedy, “The Rise of the United States,” 10-11; Chicago Tribune, July 8, 1879, 12.

⁶⁷ Kennedy, “The Rise of the United States,” 11; Chicago Tribune, July 10, 1879, 6.

⁶⁸ Kennedy, “The Rise of the United States,” 12-13.

dress customs.⁶⁹ Young women, who moved to the cities from rural areas for employment, also experienced significant life style changes.

⁶⁹ See Andrew R. Heinze, Adapting to Abundance (New York: Columbia University Press, 1990); Anzia Yezierska, Bread Givers (New York: Doubleday, 1925; reprint, New York: Persea Books, 1975); Barbara A. Schreier, Becoming American Women.

CHAPTER 5

THE CHANGING STATUS OF THE “WEAKER, GENTLER SEX”

All women’s lives changed as industrialization progressed. As the country moved from home to mass production, many young women left rural homes and families for paid jobs in the city. It was necessary for women to be educated in a manner that was different from the past in order to enter non-traditional occupations. Some women inherited wealth and used it to establish schools and other facilities for women. On occasion, women conducted themselves in ways which led to criticism or ridicule. This conduct was “news” and, as such, was reported in the newspapers of the era.

More women were educated in public schools and institutions of higher education rather than in private schools. While women earned approximately 15.9% of the bachelor’s or first professional degrees awarded in 1870, by 1930 they earned 35% of those awarded.⁷⁰ Their share of master’s degrees increased from 17.3% in 1890 to nearly 40% in 1930s. Doctoral or equivalent degrees increased from a mere 0.4% in 1880s to 14.6% in 1930s. Women choose professions in education, medicine, and other, less-traditional fields.

When young women began to prepare for professions in 1868, they were warned that scholarly pursuits would impair their health. Physicians claimed students lacked exercise, fresh air, and rest. Digestive problems, weak eyes, lack of strength, pale cheeks

⁷⁰ Wattenberg, Statistical History, 386.

and “depressed spirits” were the results of emphasizing academics over needlework or household training. The doctors prescribed less “candlelight study,” more exercise and more night rest. Some suggested that women would rather be sick than lose academic standing. Editors blamed ambitious parents who preferred educated daughters to healthy ones.⁷¹ However, the claim that education adversely affected women was unfounded. A study by Carroll D. Wright in 1885 indicated women graduates enjoyed better health than those who did not go to college.⁷²

While higher education was criticized by some, most agreed that women needed new skills for city jobs.⁷³ The New York Times suggested telegraphy or other trades for women who did not marry, were deserted, widowed, or found it impossible to live with their husbands. Most city jobs required special education, talent, or training unless a woman sewed or went into domestic service or related “drudgery.” The editor noted that men should support women. But he argued, “society never is perfect,” thus women should have a trade, business, or art that was valued by others. However, they should not to expect equal pay; there had to be an advantage in hiring women. If they agreed to work for less, they would get experience; then they could dictate their own terms.⁷⁴

⁷¹ Peterson's, July 1868, 466.

⁷² New York Times, May 21, 1885, 4

⁷³ Chicago Tribune, May 11, 1879, 4.

⁷⁴ New York Times, February 18, 1869, 4.

Women's rights supporters tried to get middle-class women to join forces with working women. The New York Times in 1869 suggested this was unrealistic because middle-class women did not understand the working-class women's need for well-paid work. The editor urged apprenticeships for girls and cautioned parents to consider their daughter's education as important as their son's. Skills such as box-making and telegraphy rather than embroidery and piano playing were advocated so young girls could support themselves.⁷⁵ Photography was also recommended for women.⁷⁶

Women sometimes took matters into their own hands. For instance, when restrictions were placed on midwives in 1849, Sarah J. Hale, the editor of Godey's Lady's Book, and other women established the Woman's Medical College of Pennsylvania. Their goal was to train medical missionaries to heal the "heathen" and help them see "the light of the blessed Gospel."⁷⁷ Eventually, the women doctors taught others and took leadership roles in several reform movements.⁷⁸

⁷⁵ New York Times, January 10, 1869, 4; Peterson's, August 1873, 148; Ernst Hermann, "Recreation and Industrial Efficiency," The Playground 4, no.10 (January 1911): 321. Over 32% of young U.S. women between the ages of 15 and 20 were gainfully employed in 1900.

⁷⁶ Chicago Tribune, August 2, 1874, 10.

⁷⁷ Godey's, May 1870, 451.

⁷⁸ Chicago Tribune, August 15, 1880, 12; New York Times, February 28, 1870, 4; April 2, 1880, 2; June 21, 1912, 13; June 22, 1912, 19.

Although co-education began at Antioch College in Ohio in 1852,⁷⁹ Matthew Vassar established the first women's college, which offered an education comparable to that of men including sports and gymnastics, in 1861. At the 1870 Vassar graduation, thirty-three women were honored for "scholastic accomplishments and polished manners." Hundreds of relatives honored the graduates and visited the facilities.⁸⁰ In 1889, a new \$25,000 gymnasium with an eight-foot-deep swimming pool was added.⁸¹

A few women went abroad for an education. The University of Zurich, which admitted women in 1865, was recommended for those who wanted to become medical doctors. By 1870, fourteen women, including a woman from Boston, were enrolled; twelve were studying medicine and two were studying philosophy. Admission of women was still experimental, although most thought the practice would continue since their presence had not been detrimental. Women, reportedly, were excellent students; one passed her medical degree examination with honors. The Chicago Tribune supported the inclusion of women in medical school; women should be trained for dignified professions where they could use their minds. According to the paper, teaching and running a boarding house were the only two "professions" accessible to women in the 1870s. "Merely... waiting for marriage is not a very satisfactory calling for a woman

⁷⁹ John Wesley Hanson, Progress of the Nineteenth Century: A Panoramic Review of the Inventions and Discoveries of the Past Hundred Years (Naperville, Illinois: J. L. Nicholas, 1900), 552.

⁸⁰ New York Times, June 23, 1870, 1.

⁸¹ New York Times, July 23, 1889, 1.

of powers and culture.” The editors felt women were suited for medicine since they were experienced in caring for the family; furthermore, women were tactful, attentive, had good judgment, “acute senses,” and understood hygiene.⁸²

Two women physicians founded the Woman's Infirmary and College; they too believed “women’s natural abilities and experience” should be enhanced with scientific knowledge. The college’s thorough three-year-course included “cliniques” and hospital visits.⁸³ To underscore women’s increasing presence in medicine and, perhaps, the magazine’s resistance to change, Harper’s Bazar quipped in 1870: “Young lady physicians are multiplying rapidly throughout the country, and consequently the young men are decidedly more sickly than they used to be.”⁸⁴ In 1880 seven women received their degrees at the 17th annual commencement of the Medical College and Hospital for Women in New York.⁸⁵

A New York teacher shortage led to the establishment of the Female Normal and High School for teacher training in 1870. It was long overdue; 200,000 school children were being taught by 3,000 teachers. The new administrator “believed in widening the sphere of women's labor and giving her an opportunity to do anything for which her temperament and strength fitted her.” However, he had no sympathy for the “few

⁸² Chicago Tribune, July 3, 1870.

⁸³ New York Times, February 28, 1870, 4.

⁸⁴ Harper's Bazar, August 20, 1870, 544.

⁸⁵ New York Times, April 2, 1880, 2.

ambitious females” who wanted to “dethrone men or participate in politics.” He felt most women did not want to vote; they should maintain their “womanly graces” by teaching “tender minds.”⁸⁶

In 1870 Catherine Beecher called for a university to prepare women for teaching and caring for the family. The proposed university required an endowment of a half million dollars which, she stated, was less than the cost of a male university.⁸⁷ By the end of the century, women were accepted in many universities and colleges. Harvard launched an experimental “annex” for women in 1880.⁸⁸ Massachusetts Institute of Technology allowed women to enroll in its program about the same time, although not everyone agreed with the policy.⁸⁹ Yale considered admitting women in 1891,⁹⁰ but women were still barred from Columbia University’s School of Journalism in 1912.⁹¹

Over time women increasingly gained higher education and non-traditional employment such as being a blacksmith, steamboat captain, department store buyers, and

⁸⁶ New York Times, March 25, 1870.

⁸⁷ New York Times, April 23, 1870.

⁸⁸ New York Times, August 7, 1899, 1.

⁸⁹ New York Times, October 12, 1881, 4; June 9, 1884, 2.

⁹⁰ New York Times, October 25, 1891, 1.

⁹¹ New York Times, March 16, 1912, 1.

capable substitutes in numerous traditional male occupations.⁹² Women also demonstrated competency in seemingly remarkable ways. For instance, seven young women supported their invalid parents and themselves by farming. After a house was built, fences installed, and land prepared, the women did the rest. Poor at first, they eventually became comfortable enough to have time for reading books and newspapers. If women could do that well, an editorial suggested healthy men had no excuse; they were urged to head west for better opportunities.⁹³ In 1899 a woman and two daughters built a brick house in Chicago. Their effort was considered so unusual that street cars made stops by their house so passengers could watch them work.⁹⁴

However, some felt women were not doing their share in 1870. An editorial noted that married, urban women were contributing less to marriage; men complained of their inability to support a wife. But they were not blameless since they treated women as pets or toys to be fondled, dressed prettily, and played with; this fostered greed in women. Being healthy and strong was not enough to get ahead. Too much was expected from men, too little from women. The editor supported women's rights, but faulted women for not assuming more responsibility. Men should not "fight the whole battle of life alone."⁹⁵

⁹²New York Times, July 4, 1915, section 3, 3; March 3, 1916, 16; March 31, 1917, 3; March 24, 1917, 15.

⁹³ Chicago Tribune, June 5, 1879, 3; New York Times, June 9, 1870, 4.

⁹⁴New York Times, August 7, 1899, 1.

⁹⁵New York Times, January 23, 1870, 4; April 14, 1879, 4.

Twenty years later, the problem had changed. It was felt women had become too independent and did not “endure the unendurable” like her ancestors. Men and women had become equals. Women had “appropriated” male shirts, although their shirts of cotton, linen, and silk were more varied. “[W]oman has demonstrated that even a shirt may have different styles. Man may boast of his superiority, but even he would not expect women to be content with one style of shirt as man has been.”⁹⁶ Women also had “stolen his waistcoat.” As women increasingly worked in stores, offices, and factories by 1890, they had adopted more streamlined, practical clothing similar to men’s wear.

Women continued to demonstrate greater independence and freedom of action. They actively engaged in a variety of protests, including the right to vote in college elections, boycotting or by-passing butchers whose prices were too high, and supporting strikers.⁹⁷ Women increasingly broke social taboos by leaving or divorcing their husbands, and, in the case of four school teachers, proposing to marry and continue teaching.⁹⁸

Sometimes women conducted themselves in ways that seemed newsworthy at the

⁹⁶ New York Times, May 11, 1890, 12.

⁹⁷ Chicago Tribune, July 14, 1879, 8; August 5, 1879, 8; New York Times, April 28, 1912, 14; June 13, 1912, 1; June 14, 1912, 8; June 17, 1912, 20; June 18, 1912, 8.

⁹⁸ Chicago Tribune, May 14, 1879, 4; June 5, 1879, 12; New York Times, June 12, 1912, 24; June 13, 1912, 1; June 14, 1912, 6, 8.

time.⁹⁹ In 1912 the New York Times shockingly reported on the front page that a well-dressed “American woman” unselfconsciously smoked a cigarette while mingling with distinguished passengers aboard a Cunard ship.¹⁰⁰ While women may have made news for trivial matters, others, especially middle-class women who had been the first of their family to get a college education, effected major change for women and society.

Women inherited money in their own right and often used it to support women’s causes.¹⁰¹ They established or joined various reform movements for the improvement of cities and its residents. In concert with women physicians, they led movements to combat disease.¹⁰² Young urban women received education and cultural enrichment through a variety of women’s clubs and organizations.¹⁰³

Not everyone was amenable to change. Girls were encouraged to participate in physical activities that were “distinctively suited to their sex.” Group activities such as folk dancing, games, walking, track, and field events were approved, but individual performances were not. Competition within a school was acceptable but never between

⁹⁹Chicago Tribune, August 3, 1874, 8; May 15, 1879, 5; May 17, 1879, 7; May 23, 1879, 12; June 11, 1879, 12; New York Times, June 18, 1912, 3; August 4, 1912, 8; June 21, 1912, 13; June 28, 1912, 13.

¹⁰⁰New York Times, August 15, 1912, 1.

¹⁰¹Chicago Tribune, May 13, 1879, 12; June 3, 1879, 12; June 28, 1912, 13; New York Times, July 17, 1912, 9.

¹⁰²Williams, Washing “The Great Unwashed,”82, 88.

¹⁰³Chicago Tribune, May 24, 1879, 8; Scott, Natural Allies, 25, 81.

individuals or with other schools. After-school programs offered exercise and other carefully selected activities that were not too “masculine.” Awards were given for attendance but not for competition. The goal was to increase organized, out-door exercise for girls to compensate for their inability to play in the streets like the boys. Female teachers received free instruction but no pay for coaching and organizing the afternoon clubs. While there was great public interest in supporting the boys’ athletic programs, there was little interest in the girls’ program. Authorities acknowledged that dress, traditions, and surroundings kept girls from adequate exercise.¹⁰⁴

This above discussion offers insight into some changes that affected women as industrialization progressed; it also pointed out some inconsistencies. Women were encouraged to be self-sufficient but not masculine. They could exercise but not compete. They could prepare themselves for well-paid employment, but they should not expect to earn the same as men. However, with the support and encouragement of their male relatives, some women saw self-sufficiency and competition as necessary for a quality life and they moved in that direction. The upper and middle classes generally did not approve of competitive women; however, women increasingly did compete.

¹⁰⁴Harper’s Bazar, August 1912, 380; New York Times, April 1, 1906, 10; December 10, 1911, section 5, 9; Dudley Allen Sargent M.D., “What Athletic Games, If Any, are Injurious for Women in the Form in Which They are Played by Men?” American Physical Education Review 11, no. 3 (September, 1906): 180.

CHAPTER 6

LEISURE, RECREATION AND SPORTS

Participation in leisure, recreation, and sports increased throughout the United States during the late 19th century. Those who left rural areas for urban employment found work schedules which rarely revolved around the growing season. For some, this included time off for a summer vacation. The less fortunate found pleasure at the near-by beaches.¹⁰⁵ Experts encouraged physical activity to counter sedentary office life or monotonous factory work.¹⁰⁶ Local clubs were established to meet the physical and social needs of the growing population and to give guidance to those without family ties.

Regardless of financial circumstances, Americans increasingly participated in sports and other outdoor activities. The number of playgrounds, baseball diamonds, tennis courts, bathing beaches, swimming pools, and golf courses increased throughout the country.¹⁰⁷ The “watering-places,” “spas,” and resorts, which had been havens for the treatment of the upper class ill, increasingly became places for the less wealthy to socialize as well.¹⁰⁸ Young members of the working classes enjoyed the opportunity to

¹⁰⁵Chicago Tribune, September 1, 1872, 3; New York Times, May 28, 1865, 5; July 10, 1866, 5.

¹⁰⁶Ernest Hermann, “Recreation and Industrial Efficiency,” 321-323.

¹⁰⁷Wattenberg, Statistical History, 399; Chicago Tribune, July 12, 1880, 7.

¹⁰⁸Banner, American Beauty, 265-266; Chicago Tribune, April 22, 1873, 2; Kidwell, Women’s Bathing Costume, 10-11.

meet potential mates in a relaxed, carefree, less status-conscious milieu.¹⁰⁹

Magazine and newspaper correspondents, as well as cartoonists, provided vivid reports from domestic and international resorts. While the New York Times emphasized the activities in New York State, New Jersey, and Europe, the Chicago Tribune included activities from Wisconsin, Michigan, the East Coast, and elsewhere. Correspondents delighted in describing the humorous aspects of “sea-bathing.” Many ridiculed bathing attire as well as the pretentious “swells,” who wore fancy clothes to the beach only to look disheveled like everyone else once in the water.¹¹⁰ In 1871 “women la[id] aside their fine dresses, false hair and all other adornments and walk[ed] from the bathhouses into the ocean in costumes that show[ed]...their figures ‘au naturel.’”¹¹¹ The activities of Cape May, New Jersey, a popular resort since James Monroe’s presidency (1816-1824), were described in detail by the popular media which was read throughout the country.

As interest in sea-bathing grew, comparisons of American, English and French bathers and facilities were reported.¹¹² Bathers in the United States wore garments that completely covered the body, but mingled and bathed in mixed sex groups as did the French. The British wore lighter weight garments but did not mingle or bathe with the opposite sex. Briefly dressed French lifeguards watched over their women and taught

¹⁰⁹Banner, American Beauty, 68-69, 78-81, 265-266.

¹¹⁰Harper’s Bazar, August 9, 1873, 512.

¹¹¹Chicago Tribune, July 28, 1871.

¹¹²Peterson's, August 1870, 154.

them to swim; spectators took in the sights. The French and American women's bathing costumes were similar; the English costumes were deemed less attractive.¹¹³ The garments worn by the English women may have been a form of functional swimwear.

In 1872 mid-westerners traveled by steamboat or rails to vacation destinations. Advertisements in the Chicago Tribune included a steamboat schedule for vacations in Montreal, Canada.¹¹⁴ Other ads described the "Alterative Waters" and "fashionable patronage" of Sulphur Springs, West Virginia. Two thousand feet above tide water, it offered "relief from prostrating summer heat" for \$3.50 per day or \$85 per month. The resort accommodated 2,000 persons and offered "tonic waters and bathing advantages."¹¹⁵ When transportation costs decreased, the urban working class joined the wealthier classes at the resorts. In some instances organizations, such as the New York Working Girls' Club, raised funds to subsidize vacations for members.¹¹⁶ Thus shop and factory girls, some as young as fourteen, had a retreat from the factories and tenements.

As early as 1866, men, women and children from New York traveled by railroad or steamboat for day-long trips to the beaches along the shores of Staten Island, New Jersey, Long Island and upper Manhattan.¹¹⁷ Other in-town recreational activities were

¹¹³Chicago Tribune, August 12, 1871.

¹¹⁴Chicago Tribune, August 4, 1872, 3.

¹¹⁵Chicago Tribune, June 14, 1873, 3.

¹¹⁶New York Times, August 4, 1885, 8.

¹¹⁷New York Times, July 16, 1866, 5.

available to young urban workers through the efforts of “voluntary associations.”¹¹⁸ The Young Men’s Christian Association (YMCA), Young Women’s Christian Association (YWCA), Salvation Army, Masonic Lodge, and other organizations flourished in cities and small towns during the late 19th century.¹¹⁹ As people increasingly lived apart from family, these groups offered social, educational, and leadership opportunities as well a sense of identity and belonging.¹²⁰ The men’s clubs emphasized athletics; the women’s groups more often emphasized self-improvement and “lady-like” physical activities.

By the 1870s, men’s athletic clubs were organized in “all towns of any importance.”¹²¹ Many, like the Chicago Athletic Club (CAC), carefully “researched” the background of potential members. Copying the London Athletic Club, the largest athletic club in the world, the CAC members were “gentleman amateur[s].” They held competitions in 18 sports including swimming. The public schools increasingly organized city-wide annual swimming championships for schoolboys.¹²² By doing this, the athletic clubs, public schools and collegiate programs prepared males for competition in the revived Olympics of 1896. By 1905, 10,000,000 American males took part in

¹¹⁸Scott, Natural Allies, 104-105; New York Times, August 4, 1885, 8; February 17, 1873, 8.

¹²⁰Louise Carroll Wade, Chicago’s Pride: The Stockyards, Packingtown, and Environs in the Nineteenth Century (Chicago: University of Illinois Press, 1997), 288-305.

¹²¹Chicago Tribune, May 19, 1872, 1.

¹²²New York Times, April 21, 1912, 9.

various athletic programs.¹²³ However 19th century girls and women were not encouraged to compete with the same seriousness of purpose. Thus, when women did compete, it was an oddity and sometimes derided, as when the The Jamaica Bay Yacht Club scheduled a race in which men swam in woman's bathing costumes.¹²⁴

Nevertheless, women's athletic clubs, such as the Berkeley Ladies' Athletic Club, promoted "physical culture" for young women. A new clubhouse, opened in 1890, included three bowling alleys and a swimming pool. Affiliated with the Berkeley Athletic Club, the popular New York men's club, the women's unit adjoined the men's and shared some of the facilities. Dr. Mary T. Bissell, the medical director, managed its operation. She took measurements, gave examinations, and supervised the gymnasiums. The club included a library, dressing rooms, lockers, baths, and "toilet" rooms. The gym had equipment especially designed for women by Dr. Sargent, the "physical director" at Harvard.¹²⁵ Women and girls gave exhibitions that featured dumbbell exercises, drills, fancy stepping, fencing, club swinging, apparatus work, and "heavy" gymnastics.¹²⁶

Women joined clubs and organizations in great numbers by 1890.¹²⁷ Women from

¹²³New York Times, July 23, 1905, section 3, 4.

¹²⁴New York Times, August 7, 1911, 8.

¹²⁵"The American Sportswoman," Fortnightly Review 62 (August 1894): 263-77; New York Times, January 14, 1890, 9.

¹²⁶New York Times, April 2, 1892, 6.

¹²⁷See Scott, Natural Allies.

all classes were involved in every concern ever “unearthed by the plowshare of progress.” Every “known species of organization enjoyed by the more privileged sex is being copied in minute detail for feminine use.”¹²⁸ Women had acquired men’s organizational skills as well as their dress.

As the 19th century came to an end, men and women from all classes engaged in a variety of activities. Leisure and recreational activities in, on, or around bodies of water were reported by the newspapers; likewise, deaths that occurred during participation were also reported.

¹²⁸New York Times, May 11, 1890, 12.

CHAPTER 7

“THE DROWNING SEASON”

Nineteenth century life relied on access to water; the most populous cities were located close to waterways which enhanced the movement of people and goods.¹²⁹ Consequently, many people were employed on or near water. Death by drowning was a problem at all times but most especially during the warm months when the desire for cleanliness, pleasure, or travel increased. Greater affluence and leisure also increased the risk of accidents. Carelessness could be fatal; a simple misstep, the innocence of childhood, a foolish decision, or noble attempt to help others could end in death.¹³⁰ Some victims were blameless; public areas and water vessels lacked or had limited protective measures. In time, life-saving organizations with trained personnel and equipment were introduced to improve safety and swimming was encouraged for self-protection.

In 1863, 55 Chicago deaths were due to drowning; fifteen occurred in July, the beginning of “the drowning season.”¹³¹ With Chicago’s population at approximately 180,000, the rate of drowning was slightly over 30 per 100,000. Prior to the establishment of the American Red Cross Water Safety Program in 1914, the U.S. rate

¹²⁹Wattenberg, Statistical History, 119, 749-750. Merchant vessel tonnage increased from 3,535,000 tons in 1850 to 16,068,000 tons in 1930.

¹³⁰Chicago Tribune, August 13, 1873; August 2, 1874, 16; July 11, 1877, 7; August 17, 1877, 2; August 10, 1878, 3; New York Times, August 12, 1912, 1.

¹³¹Chicago Tribune, January 11, 1864.

stood at 10.2 per 100,000. Twenty-five years after its creation, the rate had dropped to 5.1 per 100,000 in spite of increased water activities. By 1964 the drowning rate was 3.6 per 100,000. In 100 years, deaths by drowning significantly decreased as more people learned to swim and public safety measures were enacted.¹³²

The likelihood of death by drowning increased when Chicago became a port of entry in 1870. Many sailors and dock laborers could not swim; editors morbidly predicted that on “some foggy and slippery night, when perhaps they have had an extra glass, one false step will put a finish to their existence.”¹³³ Alcohol consumption was implicated in deaths. Heavy drinking occurred on merchant vessels and often was responsible for collisions; when this occurred, captains were arrested for carelessness.¹³⁴ Men also drank while boating with friends; these outings sometimes ended in death.¹³⁵

Bathing for cleansing purposes in open bodies of water was common during the summer, especially among males. Although it was the urban poor who most often lacked home bathing facilities, males throughout the country drowned in rivers, lakes, ponds, and ditches while bathing. People mistakenly assumed that knowing how to swim was not

¹³²Margaret A. Mays, The History of the Water Safety Program of the American National Red Cross (Eugene, Oregon: University of Oregon, School of Health, Physical Education and Recreation, 1974) 1-2.

¹³³Chicago Tribune, July 15, 1870; July 9, 1871; May 26, 1883, 4; New York Times, June 28, 1872, 4; June 9, 1874, 4.

¹³⁴Chicago Tribune, July 18, 1870; July 22, 1876, 5.

¹³⁵Chicago Tribune, July 19, 1870; August 8, 1873, 8; July 8, 1878, 2; May 20, 1879, 8; May 26, 1879, 2.

necessary if accompanied by someone who did. Multiple deaths resulted when drowning victims struggled violently and caused would-be rescuers, even expert swimmers, to drown.¹³⁶

Outings for groups of young people sometimes ended in tragedy.¹³⁷ On one occasion, friends rushed to one side of a steamer after a girl fell overboard. The deck railings broke and a dozen more fell overboard. Similarly, a rowboat capsized when seven children shifted to one side to aid a girl after she fell overboard. In accidents of this type, the boys usually survived by swimming to shore. Since few girls knew how to swim, they usually drowned or caused the death of someone trying to rescue them. Holding hands and wading into the water was a favorite activity of children; multiple deaths resulted if they encountered a drop-off or undertow.

Family members often drowned together, especially when young children naively believed they could save their siblings. In the case of a seven-year-old who jumped into the water to save his five-year-old sister, he caught her clothing but lacked the strength to

¹³⁶Chicago Tribune, July 18, 1870; July 19, 1870; July 20, 1870; July 26, 1870; July 28, 1870; July 5, 1871; July 31, 1871; September 4, 1871; June 13, 1873, 3; July 17, 1873, 1; 5; August 8, 1873, 8; August 29, 1873, 2; July 6, 1874, 1; July 28, 1874, 8; August 8, 1874, 12; July 7, 1875, 5; July 12, 1875, 2; July 8, 1878, 2; New York Times, August 31, 1878, 8; July 5, 1902, 12; June 14, 1912, 1.

¹³⁷Chicago Tribune, July 31, 1869; September 6, 1870; August 17, 1874, 8; July 7, 1875, 5; New York Times, July 14, 1868, 8; July 15, 1912, 1.

save her or himself.¹³⁸ Reports from throughout the country were woefully similar.¹³⁹ The Chicago Tribune noted one family had lost its third son by accidental death.¹⁴⁰

Death by drowning was common. Many witnessed the loss of a loved one as well as the confusion, complexity, and danger of a rescue. Experiences similar to the following led some to withhold help.¹⁴¹ When it appeared that a drowning woman would be rescued, several men, who had prepared to go to her, turned back. However, just before the rescuer reached her, she sank. After a futile search, the man headed for shore. Exhausted, he called for a rope. A volunteer went to his aid; a struggle ensued and both disappeared. A third man started for them, but they sank before he reached them. Soon this man was also in distress. By then, three people had drowned, thus no one was eager to help. In the end, a fourth man tied a rope around his waist and rescued the man.¹⁴²

Death reports gave poignant insight into 19th century hardships. Children often drowned when parents were distracted.¹⁴³ For example, while a widowed mother of four was doing laundry in a creek, two of her boys went to investigate their dog who was

¹³⁸Chicago Tribune, July 28, 1870.

¹³⁹Chicago Tribune, July 17, 1873, 1; August 1, 1873; August 6, 1873, 4; August 8, 1873, 8; August 17, 1874, 8; July 9, 1878; August 10, 1878, 3; July 6, 1880, 1; New York Times, July 6, 1880, 1; August 12, 1912, 1.

¹⁴⁰Chicago Tribune, August 11, 1877, 1.

¹⁴¹New York Times, September 24, 1877, 8.

¹⁴²Chicago Tribune, July 10, 1875, 2.

¹⁴³ Chicago Tribune August 18, 1870; New York Times, July 15, 1912, 1.

barking near a hollow log. One boy put his hand into the log and was bitten by a rattlesnake; the other tried to help and was also bitten. When the mother went to them, a sleeping toddler awoke, crept to the water-filled wash tub, fell in and drowned.¹⁴⁴

Accidents of this type may have been common.¹⁴⁵

Emigrating families faced danger while fording rivers. Wagons often uncoupled when horses balked at the river banks. Invariably, several family members and all family possessions would sink with the wagon.¹⁴⁶ Even traveling short distances over water could be hazardous. Eager to secure help for his “sick”¹⁴⁷ wife, a man took his water-logged boat across the river to pick up the midwife and her infant. Half-way back, the boat sank. Although the midwife saved her infant by floating it into tree roots near the bank, she drowned leaving a husband and four children. The man’s wife, the mother of several children, stood at her door and watched her husband drown “within the sound of her own voice.” She gave birth later that night.¹⁴⁸

More powerful boats and water-related activities arrived with the new century.¹⁴⁹

¹⁴⁴Chicago Tribune, August 5, 1870.

¹⁴⁵Chicago Tribune, September 2, 1871; May 18, 1879, 5; May 25, 1879, 5.

¹⁴⁶Chicago Tribune, May 29, 1873, 8; July 7, 1875, 5.

¹⁴⁷A 19th century term for a woman in labor.

¹⁴⁸Chicago Tribune, July 16, 1873, 2.

¹⁴⁹Chicago Tribune, August 4, 1877; July 4, 1878, 5; New York Times, July 5, 1902, 12; July 15, 1912, 3; August 26, 1912, 1.

Elaborate crafts could easily be purchased, but safety had to be learned. A man and his two daughters were aboard a 35 foot cruiser when engine problems developed. After trying to make repairs, he signaled for a tow then left his daughters on deck while he went below. When the boat lurched, the ten-year-old fell overboard. The father lowered a rowboat and headed for her. Fearing she would drown, he dove into the water and quickly reached her. However, she locked her arms about him and both drowned.¹⁵⁰

While death by drowning was sorrowful, especially when several family members drowned simultaneously, it was the excessive loss of lives on large ships that caused the greatest wrath of editorial writers. Owners, officers, and crews were accused of negligence. Survivors gave compelling eye-witness accounts.¹⁵¹ The accidents underscored the inadequacies at the docks and on the ships. Demands were made for life-saving organizations, enforcement of existing safety rules, and the establishment of new laws which would include vessel inspections.

The newspapers were particularly critical of ocean ships that carried masses of immigrants but inadequate safety equipment. They also criticized owners of pleasure steamers who invested in lavish furnishings but skimmed on safety equipment. As new shipping lines proliferated, they were accused of instituting economics which threatened passenger safety. Although the new ships were touted as models of strength and safety,

¹⁵⁰New York Times, August 14, 1912, 1.

¹⁵¹Chicago Tribune, April 3, 1873, 4; August 13, 1873, 2; May 29, 1873, 8; August 9, 1873, 1; August 6, 1874, 5; June 3, 1875, 4; New York Times, July 19, 1868, 4; June 9, 1874, 4; June 13, 1880, 1.

they often sank or caught fire readily. Passengers were lured by cheap fares to “floating palaces,” which were built for day-trips on small lakes. They were ill-equipped for night excursions on heavily traveled waterways. But lack of life-preservers, lifeboats, and trained crew were their major deficiencies.

Although required by law, life-preservers were not always accessible, sufficient, or effective. They were usually stored in the cabins, so retrieving them was dangerous, especially for women and children. Rarely were there enough for all passengers and crew. Some life-preservers were unusable “imitations.” There also were insufficient lifeboats; those available were inadequately equipped or mishandled by the crew. Some were merely for display; they were bored with drainage holes.

Survivors testified that officers and crew were untrained, undisciplined, and cowardly. Some male passengers were also derided as cowards, but others reportedly demonstrated great courage by taking control of lifesaving operations. This usually provoked the frightened crew into action. Some dishonest people took advantage of the situation by running off with the valuables or life-preservers of others.

Lives were needlessly lost when frightened people refused to jump overboard, even in shallow water, or leaped carelessly. Multiple deaths occurred when people jumped en masse. Many survived, even if they lacked life-preservers, by going overboard cautiously. They were sustained by boxes, mattresses, furniture, or other objects.

Most children did not survive shipwrecks. They often were swept overboard by crowds or rushing water. Parents held children when they jumped, but they usually lost

hold of them. If a person with a child appeared defenseless, their mattress or floatation object often was taken from them. When a scuffle ensued, the children were lost.

A high percentage of the steerage class also lost their lives. Editorials suggested the disasters would be taken more seriously if the lost lives belonged to prominent people instead of poor immigrants. Shipping companies underestimated the fatalities; the truth could not be verified because lists were incomplete. Lists for passengers with state rooms were fairly accurate, but lists for steerage were always vague. Remarkably, some people, including women and young children, survived more than one collision.

The “undue loss of life”¹⁵² continued into the 20th century. When the Titanic sank in 1912, it appeared as though the calamity was novel.¹⁵³ Newspaper editors expressed shock and demanded better laws. There was outrage over poorly trained crew and inadequate life-saving equipment, especially for those in steerage. The complaints were not unlike those of the 1860s, 1870s, and 1880s.

Several generalizations emerged from these accounts. Everyone, male and female, crew and passengers, feared for their lives. Few were able to care for others when their own survival was in jeopardy. Steamers carried inadequate or inaccessible safety equipment; they also lacked trained employees. Families frequently became separated. Women and children, unprepared to care for themselves, were at a serious disadvantage.

¹⁵² Chicago Tribune, August 13, 1873, 2.

¹⁵³ New York Times, April 17, 1912, 10, 12.

Knowing how to behave in a water emergency was crucial during the 19th century. Being prepared and self-sufficient improved the chance of survival.¹⁵⁴ In 1850 the Scientific American noted that two women had survived a shipwreck. One lady, “upwards of sixty years of age,” floated on a plank. The other, a young woman, calmly floated on her back until picked up; she had been told, if she “would lie perfectly still and simply move her hands, she would be sustained” if thrown overboard.¹⁵⁵

As far back as 1860, the press advocated swimming and floating to avoid drowning. “A woman who knows how to float is safe for many hours in the sea.”¹⁵⁶ Noting that few residents could swim, the New York Times chided that “a country boy’s education was considered poor” unless he could “swim like a feather and dive like a stone” before the age of ten.¹⁵⁷ Ship owners and businesses situated near water were urged to motivate their employees to learn with races and prizes. Money spent for death pensions could be saved if companies heeded the advice. Editors urged the establishment of European-style swim schools; swimming was as important to society as riding or dancing schools. Many suggested it should be compulsory education.¹⁵⁸

¹⁵⁴New York Times, June 30, 1912, 11.

¹⁵⁵Scientific American, 5 (May 1850): 362.

¹⁵⁶Peterson’s, April 1860, 335.

¹⁵⁷New York Times, July 16, 1866, 5.

¹⁵⁸Chicago Tribune, July 3, 1874, 3; New York Times, June 28, 1872, 4; August 25, 1872, 4; June 9, 1874, 4; August 6, 1881, 4.

Greater water safety was also advocated. Manned life boats were urged for private beaches. Those who offered boats for rent were asked to assume greater responsibility for safety. Bathers were warned against over-confidence; they were encouraged to use safety ropes and not consider their use “unmanly” or “childish.”¹⁵⁹

Survival frequently depended on the ability to calmly assess the situation and make an appropriate decision. An 1891 editorial noted the “drowning season” had officially begun with the death of a young man who tried to rescue a girl. His death was not an “empty sacrifice” if it warned others. Boats were available for assistance; the best help one could give to a distressed person was to stay calm and help the victim stay calm until help arrived. It was important to “[k]eep your head.”¹⁶⁰ It usually paid off.¹⁶¹ Nevertheless, staying calm was difficult when children were involved. Therefore, devices for life-saving and learning to swim were invented to improve the chance for survival.

¹⁵⁹Chicago Tribune, September 1, 1871; June 11, 1876, 3; New York Times, August 20, 1872, 4; September 1, 1880, 4.

¹⁶⁰Chicago Tribune, August 13, 1873, 2; August 30, 1875, 7; New York Times, June 28, 1891, 4.

¹⁶¹Chicago Tribune, August 21, 1871; June 13, 1873, 3; July 6, 1874, 1; New York Times, July 15, 1912, 3.

CHAPTER 8

LIFE PRESERVERS AND OTHER DEVICES

The frightening conditions of 19th century water travel prompted many inventions. In reviewing selected patents that were issued for life preservers and water training apparatus (see Appendix D), I gained insight into the fears of the era. The life-saving devices were often tested and promoted by renowned swimmers.

An apparatus for learning to swim was patented by Socrates Scholfield in 1863. The “halo-style,” inflated rubber ring fit snugly around the head with tubes leading to the nostrils and mouth for breathing; a person could use the device until able to swim unaided.¹⁶² Scholfield also devised a series of sheet metal floats; they gradually took on water and detached when the student executed the appropriate strokes.¹⁶³ In 1869 Frederic Barnett of France patented rubber fins to aid in swimming.¹⁶⁴ Similar to fins currently in use, they were made of firm, supple rubber and worn on the hands and feet. In 1874 George Clark, Jr. patented a life-preserver of buoyant material attached to a steel spring band. When relaxed, the band had a small diameter that easily expanded to fit any waist; when released, it automatically adjusted to the body. Its advantage was that it

¹⁶²Socrates Scholfield , “Apparatus for Teaching the Art of Swimming,” U.S. Patent 38,505 (May 12, 1863).

¹⁶³Socrates Scholfield , “Improvement in Teaching the Art of Swimming,” U.S. Patent 39,311 (July 21, 1863).

¹⁶⁴Frederic Barnett, “Swimming Apparatus,” U.S. Patent 91,300 (June 15, 1869).

required no other fastening in the event of an emergency.¹⁶⁵ Zenane N. De Ledochowski's life preserver, a series of inflatable pockets which surrounded the body, folded compactly when not in use and could be inflated quickly when needed.¹⁶⁶ Hachig A. Ayvad patented a life-preserver with inflatable wing-shaped bags. The device, which could be inflated quickly, stayed in place without fasteners.¹⁶⁷

Garments were also designed with life-saving properties. Rufus Porter patented a pantaloon-like garment with attached boots in 1840.¹⁶⁸ The garment, supported with shoulder straps, slipped over the feet and up to the armpits. Six inflatable air chambers encircled the body of the garment; above each foot was a fin for propulsion. Sarah E. Saul of New York may have been guided by her own concerns when she designed her life preserver in 1870 (see Figure 2). A light weight "hoop-skirt" that could be worn at any time, its gradually decreasing hoops of cork or other buoyant material were enclosed in muslin casings. Perforated and strung on a wire or cord from the waist, the hoops were light and comfortable. They could be worn beneath a bathing dress to prevent drowning

¹⁶⁵George Clark, Jr., "Improvement in Life preservers," U.S. Patent 149,721 (April 14, 1874).

¹⁶⁶Zenane N. De Ledochowski, "Life Preserver," U.S. Patent 309,032 (December 9, 1884).

¹⁶⁷Hachig A. Ayvad, "Life Preserver," U.S. Patent 673,672 (May 7, 1901).

¹⁶⁸Rufus Porter, "Improvement in Life preservers or Buoyant Dresses," U.S. Patent 1619 (May 25, 1840).

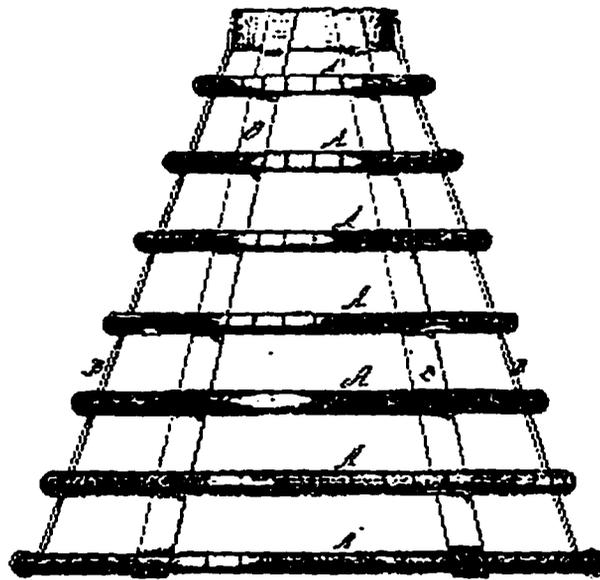


Figure 2. Sarah E. Saul's Hoop Skirt Life-preserver, USP 105,730 (1870).

or “indelicate exposure of the outline of the bather’s person.” It also could be worn under clothes while traveling. In the event a women had to abandon ship, she could “throw herself fearlessly into the water without a moments[sic] preparation.” Since “females [were] usually, to a great extent, paralyzed with fear and excitement” this device was convenient because it did not have to be located, put on, or adjusted.¹⁶⁹ Sigmund Asher’s bathing garment had a back pocket which held an inflatable rubber bag.¹⁷⁰ The bather inflated it when he became fatigued or “met dangerous currents.” The bag held the head and shoulder above water; it could be worn by those learning how to swim. Asher did not explain how someone would have the time or clarity of mind to inflate the bag while dealing with a dangerous current.

A buoyant corset was offered by the Pneumatic Vest and Corset Company of New York (see Figure 3). Worn beneath a bathing suit, it held enough air to keep a body afloat. The company also made a vest for men.¹⁷¹ Captain Stoner invented a cork jacket-float and a rubber suit which covered the body except for the face. Weights at the ankles kept the feet down and body upright. The inventor and a friend demonstrated the garment. They jumped into the water, sank to their armpits, and remained in that position although they could turn by using their hands. After an hour and a half, they removed the

¹⁶⁹Sarah E. Saul, “Improved Life Preserving Skirt,” U.S. Patent 105,730 (July 26, 1870).

¹⁷⁰Sigmund Asher, “Bathing Garment” U.S. Patent 313,845 (March 17, 1885).

¹⁷¹The India Rubber World and Electrical Trades Review, 16, no. 4 (July 10, 1897):277.



Figure 3. Pneumatic Bathing Corset from The India Rubber World, 1897, 277.

suit and displayed their dry clothing. Supposedly, the suits could be put on in minutes.

The suits were furnished with a tin of provisions and a flag for signaling; rubber fins were also recommended.¹⁷²

An inflatable swimming collar intended to keep a person's head above water was available in 1873. The circular, cotton-covered rubber tube fit over the head and around the neck; it was secured with ties. The two-ounce device was not meant to replace the life-belt which kept a person's shoulders and chest above water. While the life-belts were large and cumbersome, the deflated collar was the size of a pair of gloves or stockings.¹⁷³

In 1873 problems associated with wooden lifeboats were highlighted by a Chicago Tribune reader who advocated the development of rubber life-rafts to eliminate deaths caused by terror, haste, or lack of skill. Wooden lifeboats required skill to operate, were easily swamped with water, or were destroyed when thrown overboard. The proposed rafts would require no skill or presence of mind to activate.¹⁷⁴

Celebrities promoted the new inventions. In 1874 C. S. Merriman, a New York inventor, offered \$500 to Paul Boyton, the renowned swimmer, to test his life-preserver. Boyton planned to take a steamer 200 miles away from New York, then jump overboard and remain there until picked up by a passing vessel. Rations, water, signal lights, and flags would be stored in a rubber bag and strapped to the swimmer. Boyton confidently

¹⁷²New York Times, May 28, 1868, 5.

¹⁷³Chicago Tribune, September 3, 1873.

¹⁷⁴Chicago Tribune, August 15, 1873, 3.

selected a date when the weather would be at its worst.¹⁷⁵ He survived that test, then used the device to cross the British channel and travel down the Mississippi River to the Gulf of Mexico. The life-preserver was highly touted for steamship passengers.¹⁷⁶

Others promoted the garment. Passengers watched as a schooner captain climbed into “Boyton’s” water-proof suit, inflated it by mouth then jumped overboard with a “double paddled oar.” He demonstrated the garment’s ability to support two people by carrying a fully-clothed man, who verified his comfort by smoking a cigar, reading a newspaper, eating a sandwich, and wiping his nose with a handkerchief. Duly impressed, the spectators promised to purchase the garment before going up in a balloon or off to Europe. Its only drawback was the possibility of being punctured.¹⁷⁷

As noted earlier, life preservers were generally stored in the cabins; thus, returning for one may have been as dangerous as not having one at all. Additionally, they were often ineffective, insufficient in number, or difficult to put on under stress, especially if children were present. The patent descriptions of life preservers and related garments reiterated these problems. Women required devices that were durable, easy to store or wear at all times, and easy to apply. Moreover, they had to stay in place without assistance; their hands had to be free to care for children or to grasp floating objects.

¹⁷⁵Chicago Tribune, August 9, 1874, 5.

¹⁷⁶Chicago Tribune, June 3, 1875, 4; May 25, 1879, 16.

¹⁷⁷Chicago Tribune, August 27, 1875, 8.

It made sense to carry one's own life-preserver since they reportedly were difficult to secure during disasters. Women may have increasingly understood the dangers of the water and their own responsibility in being prepared. After a dance at the New Rochelle Rowing Club in 1912, a young woman capsized in a row boat. Anticipating this might happen, six members dove into the water to rescue her. When they reached her, she was holding onto the boat while inflating a pair of water wings. "Thank you, gentlemen, I came quite prepared." She, too, had anticipated the possibility of capsizing thus wore the wings under her evening gown.¹⁷⁸ Since the press reported how people drowned or saved themselves and warned of the dangers of being helpless, many women may have decided to protect themselves and their loved ones by carrying their own life-preservers and learning how to swim.¹⁷⁹

¹⁷⁸New York Times, August 26, 1912, 1.

¹⁷⁹New York Times, August 9, 1869, 2.

CHAPTER 9

**“BEAUTIFUL MERMAIDS,” “WATER WITCHES,”
AND “REMARKABLE FEATS”¹⁸⁰**

An engraving in the August 1849 edition of Godey’s Lady’s Book depicted men and women cavorting at the Cape May beach.¹⁸¹ It is unknown exactly when women began to swim in the United States; however, it is likely that some may have been floating or swimming at the date of this engraving. Early female swimmers swam for exhibitions, competitions, general recreation, exercise, safety, or to earn a living.

The April 1860 Peterson’s “Health Department” column touted swimming as a “healthful” and “pleasant accomplishment.” When parents requested information on “how girls can be taught the use of their limbs in the water,” the editor complied by offering details on Parisian facilities and techniques. The article explained how French women learned to swim with a rope attached to their waist and to the ceiling. Once the strokes were learned, the rope was eliminated and a pole was held in front of the student for grasping if fatigued or frightened. The instructors were men in France, while women taught in Germany.¹⁸²

¹⁸⁰ New York Times, August 31, 1874, 8; Chicago Tribune, August 27, 1874, 8; New York Times, May 25, 1889, 3.

¹⁸¹ Godey’s, August 1849.

¹⁸² Peterson’s April 1860, 335.

In the 1870s women in the United States learned to swim at public and private bathhouses as well as at resorts such as Newport and Long Branch. The public bath program in Boston advocated swimming for self-protection and to save others; many outstanding women swimmers were nurtured in Boston. Women were urged to take charge of their “physical condition” instead of “whining and ailing.”¹⁸³

Unusual feats of physical prowess fascinated the public in the 1870s.¹⁸⁴ Troupes of jugglers, acrobats, “equilibrists,” and other performers toured the country under the auspices of P. T. Barnum, Buffalo Bill, and others.¹⁸⁵ Swimmers were among the traveling performers; they generated great interest in the sport.¹⁸⁶ Outstanding swimmers earned a living giving exhibitions and lessons, and conducting contests.

Many early women swimmers were encouraged and tutored by male relatives.¹⁸⁷ Among outstanding swimmers were the daughters of bathhouse owners, the granddaughter of a famous naturalist, and sisters or daughters of champion male swimmers.¹⁸⁸ Some fathers taught their daughters to swim to compensate for medical problems.

¹⁸³New York Times, October 18, 1874, 5; Chicago Tribune, July 20, 1879, 7.

¹⁸⁴Chicago Tribune, July 4, 1872, 4; New York Times, September 17, 1877, 8.

¹⁸⁵Chicago Tribune, July 19, 1870; July 24, 1879, 12; July 7, 1879, 5; Neil Harris, Humbug: The Art of P.T. Barnum (Chicago: University of Chicago Press, 1973), 235-276.

¹⁸⁶New York Times, September 27, 1875, 6; October 3, 1875, 4.

¹⁸⁷New York Times, August 11, 1872, 8; August 26, 1875, 2; September 3, 1877, 8.

¹⁸⁸New York Times, July 27, 1913, section 4, 3; August 25, 1913, 6.

Physicians had recommended bathing and swimming for “hip and spine complaints” and as “the best means of gaining bodily strength.”¹⁸⁹

In 1875 two highly competitive 14 year-old English women fueled an interest in swimming in England and the United States.¹⁹⁰ Agnes Beckwith, the daughter of a renowned swimming teacher, swam from the London Bridge to Greenwich, a distance of six miles, in less than an hour and eight minutes. Encouraged by her father, she received international acclaim for her feat.¹⁹¹ Emily Parker, the sister of a swimming champion, surpassed Agnes’ record a few days later. Tutored by her brother, she began swimming at the age of ten and was known throughout England. During long distance swims, her brother followed in a boat and joined her in the water at the end of her swim. Competition between the women intensified as each broke new records.¹⁹² Their feats demonstrated that well-trained women had as much endurance as men.

Agnes Beckwith’s thirty-hour stay in a whale holding tank was highly publicized. Without touching the bottom or sides of the tank, she performed various routines while spectators watched. Her endurance record “would still be considered remarkable in a man, and most remarkable, indeed, in the case of a slight, graceful girl, not yet out of her

¹⁸⁹Chicago Tribune, July 8, 1877, 11; Annette Kellerman, How to Swim (New York: George Doran Company, 1918), 13-15. “San Francisco’s Mermaid,” Sunset 28 (June 1912): 723-726.

¹⁹⁰New York Times, July 18, 1876, 8; New York Times, August 8, 1880, 3.

¹⁹¹New York Times, September 18, 1875, 10.

¹⁹²New York Times, September 20, 1875, 2; October 4, 1875, 5.

teens.”¹⁹³ The famous Captain Webb had accomplished the feat earlier, but in a less active manner. He subsequently surpassed her record by staying in the tank sixty hours.¹⁹⁴

In 1883 Agnes toured the United States with her brother, his family, and a manager; they also added an American manager. The Beckwiths scheduled swimming, diving, and life-saving exhibitions as well as challenge matches “with anyone who desire[d].”¹⁹⁵ One of Agnes’ routines offered a commentary on water travel. Called the “prayer,” she kicked her feet while clasping her hands above her head. She suggested one could pray for help while paddling toward shore after a ship collision.¹⁹⁶

Other professional women swimmers caught the fancy of the public in the late 19th century. In 1889 Annie Fern, supposedly from Sweden, and her troupe of women swimmers were scheduled to perform in New York after a stay in Boston. Two hundred people paid to see the show; however, Fern took ill and did not show up. Fern, now called the “Norwegian lady fish,” arrived three days later. The troupe performed “remarkable feats” in the large pool at the 5th Avenue and 45th Street swimming school. A few days later the “English damsels” demonstrated “that poor humanity, when possessed of sufficient self confidence, abundant will power and proportionate physical strength and dexterity, [was] equally capable of existing in the water as on land.” “Professor

¹⁹³New York Times, May 22, 1880, 2.

¹⁹⁴New York Times, August 8, 1880, 3.

¹⁹⁵New York Times, June 5, 1883, 2; July 1, 1883, 7.

¹⁹⁶New York Times, June 9, 1883, 2.

Dundello of London” introduced the “veritable amphibians” who performed for three hours.¹⁹⁷ In all likelihood, the Professor was their manager who assigned various nationalities to Fern and the troupe as a marketing ploy.

Women and girls were competitive swimmers at least as early as 1872. They received money, gold jewelry, or clothing for their efforts. A large crowd watched as seven competitors swam a half-mile race at Richard Allen’s bathhouse and swimming school. Katie Allen, daughter of the proprietor, won the first prize of \$75 with a “powerful trained stroke.” A married woman, Mrs. Siegel, also competed. Interestingly, the prize for the boy’s competition was only \$35. Mr. Allen may have been showing favoritism or may have known that his daughter would win; or it may have been a publicity stunt.¹⁹⁸

Competitions were also held the following year. Katie and Ellen Allen, Mary Cunningham, and Fredrika Sands swam in rough waters with “as much courage as the swimmers of the sterner sex.” Unbeaten Katie Allen won, but offered her prize to runner-up, Ellen Allen, probably her sister. “A force of policemen” kept order and the day ended with dancing to band music on a platform near the bathing houses.¹⁹⁹ Later that summer, 10 females competed in a one mile race in the Harlem River. Miss Goboess won with a

¹⁹⁷New York Times, May 22, 1889, 8; May 25, 1889, 3; May 26, 1889, 2.

¹⁹⁸New York Times, August 11, 1872, 8.

¹⁹⁹New York Times, July 27, 1873, 5.

time of 40 minutes. Miss Denan had taken the lead but stopped to rescue a young man. Spectators promised to give her a gold watch for her bravery.²⁰⁰

Four or five hundred spectators watched competitions at the Fort Hamilton Beach in New York in 1874. Kate Bennett, an expert swimmer and instructor at the free baths, conducted the events. Married women were among the 50 competitors.²⁰¹ In another contest organized by Bennett, 24 contestants were expected, but bad weather reduced the number to ten. The hearty “water-witches” included three sets of sisters, who were “remarkable no less for beauty than for the grace which characterized their movements.” Bennett, an enthusiastic promoter of swimming, claimed, “The grace which they acquire...clings to them on the land...the best swimmers always prove [to be] the best walkers and best dancers.” Competitions were held after the women demonstrated various aquatic skills. Male swimmers lined the course for safety during the meet. Annie Mason led in the 500 yard match and was quickly joined by her sister, Adeline. Annie won the race in two minutes and 20 seconds. Adeline won the 300 yard match.²⁰²

At the end of the season, 400 spectators gathered to watch 24 females compete. However, a rumor had circulated that Lily Eldred, an “unrivaled swimmer,” was to compete. Few wanted to race against her, thus only “four fearless ladies” showed up. The

²⁰⁰New York Times, September 7, 1873, 8.

²⁰¹New York Times, July 10, 1874, 5.

²⁰²Chicago Tribune, August 27, 1874, 8.

“beautiful mermaids,” Annie and Adeline Bogenkamp and Kate and Annie Hall swam the 300 yard race; Annie Bogenkamp won the race in two minutes.²⁰³

Two weeks later, 14 students demonstrated in “agitated” waters for a newspaper reporter. Kate Bennett reiterated her view that it was important for women to swim. She and her students performed various skills and “ducked themselves precisely as a man would.” The “water witches” were of all ages and sizes; a 60 year-old swam “like a fish.” Bennett estimated that she had taught several hundred women to swim.²⁰⁴

Bennett continued to promote swimming; she stressed that minimal instruction was required for young girls or middle-aged women to become competent. She advocated swimming for “healthfulness and usefulness.”²⁰⁵ In 1878 she held an exhibition in an 80-by-10 foot cement tank which held four feet of water. Her students confirmed that age, sex, or build were not significant factors in learning to swim.²⁰⁶

In 1878 Eliza Bennett,²⁰⁷ eighteen, swam a mile across the Hudson River without fatigue. To honor of her accomplishment, a “beautiful boat” was at her disposal.²⁰⁸ In the

²⁰³New York Times, August 31, 1874, 8.

²⁰⁴Chicago Tribune, September 12, 1874, 9.

²⁰⁵New York Times, September 14, 1877, 2.

²⁰⁶New York Times, September 1, 1878, 12.

²⁰⁷It is not known whether Eliza Bennett and Kate Bennett were related. Both were from the New York area. Kate presumably was older; in 1874 she had been teaching at the public baths for several years.

²⁰⁸New York Times, August 24, 1877, 8.

same year, 4,000 people paid to watch Ernst Von Schoeing, a teacher at Braun's Bathing Park, conduct swim races. Six females competed in the featured event in which Miss Braun, most likely the daughter of the owner, beat Miss Schwab by a few seconds.²⁰⁹ Braun hosted other contests which included women.²¹⁰

In August 1879 Kate Grant held competitions at her school near the Harlem River. One thousand spectators watched as students demonstrated skill and endurance. For safety, the course was lined with 100 row boats which carried male swimmers. In the first race, six girls attempted to cross the river. While three became frightened and were removed from the water, the other three finished. In the last and longest race, two married women and a 10 year old finished the distance.²¹¹

Considerable attention was paid to the physical attributes of women competitors in a match at the Almond Street Baths. The descriptive reports gave height, weight, body type, and age in a manner suggestive of a scientific study like those done of Dr. Sargent, the Harvard expert on women's physiology and athletics.²¹² The "feminine" details may have been exaggerated to calm the 19th century anxiety over women becoming "too masculine." One woman was described as having "short black hair that curl[ed] about a

²⁰⁹New York Times, September 3, 1877, 8.

²¹⁰New York Times, September 2, 1878, 8.

²¹¹New York Times, August 23, 1879, 8.

²¹² New York Times, December 4, 1910, section 5, 4; Rice, A Brief History of Physical Education, 271.

well shaped head, a pair of large hazel eyes, and a saucy mouth.” Another was “well-developed” with “large blue eyes, a clear complexion...color in her cheeks, and...long wavy hair” which made her appear like “a water nymph.” A third was “trim-built little woman” with a “neat figure....gray eyes, regular features, and a firm, set mouth.”²¹³ Male competitors at the New York Athletic Club also were described in terms of physical attractiveness. Reportedly, they swam in suits which “displayed manly arms and powerful chests.”²¹⁴

Women’s swimming events in the late 19th century began attracting the upper classes, especially those events held at resorts, private clubs, or colleges. Increasingly, female competitors were the daughters of medical doctors, businessmen, and other professionals. In 1890, the 19 year-old daughter of a Brooklyn doctor won a one mile swim at Coney Island for the third consecutive year.²¹⁵ Distinguished citizens were among 600 spectators who watched matches at the Hollywood Baths and Pool. However, the women’s race was canceled when amateurs refused to compete against professionals.²¹⁶ In 1893 a large crowd gathered to watch two popular, athletic sisters compete at Larchmont. Eleven entries were expected; all but three canceled because the competition appeared “too expert.” The 19 year-old daughter of a prominent doctor won

²¹³New York Times, August 12, 1884, 1.

²¹⁴New York Times, August 31, 1884, 2.

²¹⁵New York Times, August 31, 1890, 5.

²¹⁶New York Times, August 17, 1890, 6.

the race. She was described as tall, handsome, and “well-developed,” she was a complete athlete who enjoyed sailing, riding, and billiards.²¹⁷

Swimming gained popularity with the older, wealthier members of society, too. Before the official bathing season began in June of 1895, citizens from an upscale section of New York went to the natatorium near Fifth Avenue to learn to swim. “Mermaids” and “mermen” swam for “beauty and grace” as well as fun. Participants, including members of prominent families, were “not only pretty young women and children, but mothers and grandmothers, who float[ed]...around in the big bath or indulge[d] in all sorts of larks, according to their nature and inclination.”²¹⁸

Not everyone acknowledged women’s ability to swim. Some believed there were few competent female swimmers. They claimed that women lacked swimming ability because they distrusted themselves; boys and men fearlessly went into deep water because they trusted their strength. Supposedly women also had weak backs and arms that were “more like cotton than steel.” The critique also claimed that women did not develop endurance because they used the “dog” paddle rather than an overhand stroke. A physician added that men’s strength was due to the muscles in his chest; since women had “bosom[s]” instead of chest muscles, it was not possible for them to develop a good stroke.²¹⁹ The critics may have based their erroneous conclusions on observations of

²¹⁷New York Times August 6, 1893, 3.

²¹⁸New York Times, June 11, 1895, 8.

²¹⁹New York Times, July 7, 1895, 21.

women at beaches where restrictive costumes were worn. There were many powerful women swimmers before 1900.

For example, a young, fully-clothed Massachusetts woman rescued a seventeen-year-old boy from the river in 1874. The town wanted to honor her, but she preferred not to draw attention to herself. However, she accepted a new wardrobe to compensate for the clothes damaged in the rescue.²²⁰ A seventeen-year-old rescued a famous actor after he struck his head while swimming. She watched him rise, dove into the water, and seized the unconscious man. As she swam with his dead weight, the tide carried her away from shore; but ultimately she towed him to shore, keeping his head above water at all times.²²¹ Other women saved lives as well.²²²

As attitudes changed near the end of the century, private clubs scheduled competitions for women, including guests of elite hotels and boarding houses. The New York Yacht Club, Bar Harbor Society, Northeast Harbor, New York Athletic Club, Atlantic Yacht Club, and Rye Water Club held “aquatic contests” for women. By 1911, a women’s metropolitan championship match was scheduled.²²³ “Swimming experts [were] being catered to with a lavish hand by the clubs hereabout which are interested in the

²²⁰New York Times, October 18, 1874, 5.

²²¹New York Times, July 2, 1898, 4.

²²²New York Times, August 13, 1912, 18; August 22, 1912, 2.

²²³New York Times, August 23, 1897, 1; July 13, 1902, 28; April 25, 1911, 9; August 15, 1911, 6; September 9, 1911, 6.

development of the sport.”²²⁴ New York Mayor Gaynor and Police Commissioner Waldo were among the distinguished spectators at these events.²²⁵ Growing interest in swimming was underscored by the installation of new pools throughout the country.²²⁶

The activities of international women swimmers who attempted to swim the English Channel were of great interest.²²⁷ Annette Kellerman was one of these outstanding swimmers.²²⁸ Like other Australian children, she began swimming at an early age. Moreover, her father took special efforts with her to compensate for a childhood illness. After setting records in Australia, she went on tour. At the age of 19, she swam down the Danube and the Thames; she made three attempts to cross the English channel. She became controversial when arrested for wearing a one-piece bathing suit in public. Her notoriety led to sell-out performances. She performed in vaudeville and the movies as well as designed and promoted swimwear. Her popularity led to her title as “The Million Dollar Mermaid.” In 1909 Dr. Dudley A. Sargent, the

²²⁴New York Times, August 15, 1911, 7.

²²⁵New York Times, August 11, 1911, 7.

²²⁶New York Times, August 13, 1911, section 4, 6; Curt Teich Postcard Archives.

²²⁷New York Times, September 18, 1900, 12; July 27, 1905, 1.

²²⁸ Annette Kellerman, “How I Swam Into Fame and Fortune,” American Magazine 83 (March 1917): 33-37; Duncan Crow, The Edwardian woman (London: Allen and Unwin, 1978), 118-119; Robert Grau, The Business Man in the Amusement World; A Volume of Progress in the Field of the Theater (New York: Broadway Pub. Co., 1910), 337-339; Kellerman, How to Swim, 24-25; Janet Woolum, Outstanding Women Athletics: Who They Are and How They Influenced Sports in America (Phoenix, Arizona: The Oryx Press, 1992), 25.

Harvard University researcher, stated she had a near ideal body, a model for young girls.

He believed swimming had given her a beautiful figure and grace (see Figure 4).²²⁹

Swimming may also have contributed to her longevity; she lived to be 89.

Young girls and women swam in the 19th century for a variety of reasons. Swimming was an enjoyable, appropriate exercise for women and had the added advantage of offering some protection against drowning. Physicians recommended the activity for therapeutic reasons; male relatives also encouraged young girls to swim. Women competed for prizes or performed for fees. Some women were employed at bathhouses, beaches, or resorts.

Two important issues emerged by the end of the century: the increased respectability of competitive woman athletes and the growing dichotomy between amateur and professional status. The latter issue became paramount in the renewed Olympics in 1896. The desire to define and separate the two categories of athletes may have been a means of class differentiation. Amateur athletes generally came from collegiate or private club backgrounds. "Professional" swimmers usually came from less affluent backgrounds; they swam or performed for a living.

²²⁹New York Times June 3, 1909, section 5, 7.



Figure 4. Annette Kellerman from Kellerman, How to Swim, 1918, 49.

CHAPTER 10

U.S. WOMEN OLYMPIANS: A MISSED OPPORTUNITY

World-wide interest in sports and recreation grew at the same time that nationalism and distrust between nations grew.²³⁰ Baron Pierre de Coubertin of France proposed the modern Olympic games as a means of fostering international goodwill, honoring amateurs, and curbing the commercializing of sports.²³¹ Delegates from nine nations met in 1894 to organize games which would be free of commercial or political influence. Qualified amateurs, regardless of social class, would demonstrate moral nobility, purity, and physical prowess through competition.²³² However, the behavior associated with the revived Olympic games often contradicted those objectives.

Thirteen men, mostly collegians or members of private athletic clubs, represented the United States in the first games. Traveling by tramp steamer, they competed with 311 athletes from 13 nations and took 11 first place awards; Greece won ten.²³³ In Paris four years later, 55 U.S. athletes, again mainly collegians or members of athletic clubs, were among the 1,330 competitors from 22 countries. Despite “misunderstandings,” they won

²³⁰Kennedy “The Rise of the United States,” 3-14; Chicago Tribune, July 4, 1880, 4.

²³¹The Associated Press, Pursuit of Excellence, 26.

²³²The Associated Press, Pursuit of Excellence, 28.

²³³The Associated Press, Pursuit of Excellence, 36-38.

21 first-place awards; France led with 26. Women competed in lawn tennis and golf; the United States' Margaret Abbott won first place in the golf event.²³⁴

Due to distance and political discord, only 625 athletes from 12 countries attended the 1904 St. Louis games. Eight athletes competed in the women's events which were limited to archery; the U.S. women won all the gold medals. At the close, the United States had 70 first-place awards; Cuba was second with five gold medals.²³⁵

Twenty countries sent 884 athletes, including seven women, to the 1906 interim games in Athens. France won 15 gold medals; the United States won 12. For the first time, the U.S. had a unified team of 35 athletes selected by its Olympic Committee. They trained as a unit, wore official uniforms, and were funded by public contributions; however, they were not selected by competitive tryouts. Instead they were picked on the basis of their reputation. All were males.²³⁶

Twenty-two nations sent 2,035 athletes to the 1908 games in London. The United States sent 125 male athletes; for the first time, they were selected by try-outs. When the U.S. athletes refused to lower their flag for the King of England, animosities surfaced. Thirty-six women participated in gymnastic demonstrations, lawn tennis, and figure skating. Great Britain won 56 gold medals; the United States won 23. Cries of favoritism brought to an end the practice of having host nations supply judges. To insure

²³⁴The Associated Press, Pursuit of Excellence, 46.

²³⁵The Associated Press, Pursuit of Excellence, 53.

²³⁶The Associated Press, Pursuit of Excellence, 58.

impartiality, international governing bodies for each sport assumed responsibility for their respective events.²³⁷

In 1912, 28 nations and 2,547 athletes participated in Stockholm. Women's swimming and diving events were scheduled, but women from the United States were not included in the U.S. team.²³⁸ Women from Australia and Sweden won gold medals in those events. At the close of the games, Sweden and the United States, with 24 each, tied for the most gold medals.²³⁹ Had the U.S. team included women swimmers, they would have won the most gold medals. It is beyond the scope of this study to discuss the reasons for their exclusion, but it was not for lack of qualified swimmers.

The U.S. women would have been powerful contenders in 1912. They had demonstrated superior swimming ability for years and often surpassed men in long distance meets. As far back as 1877, females swam distances greater than a mile.²⁴⁰ In 1902 Florence West and three males, all 16 years of age, set out for Staten Island from Brooklyn. One man many dropped out after 5½ miles; the others made the distance.²⁴¹ In 1904, 32 swimmers set out for Coney Island from the Brooklyn Bridge. Again, Florence

²³⁷The Associated Press, Pursuit of Excellence, 62-63.

²³⁸New York Times, April 23, 1912, 14.

²³⁹The Associated Press, Pursuit of Excellence, 73.

²⁴⁰New York Times, August 24, 1877, 8; August 28, 1887, 5; September 13, 1888, 9.

²⁴¹New York Times, July 14, 1902, 12.

West successfully made the distance as did Eleanor Weber. The women showed greater endurance than most of the men.²⁴²

Women consistently set long-distance records. Alice Fitzgerald swam the Hudson River in 57 ½ minutes in 1906. This surpassed Ruth Frank's record of 73 minutes.²⁴³ Later Frank surpassed Fitzgerald's record by making the distance in 45 minutes.²⁴⁴ In 1908 Lottie Mayer swam 26 miles from Alton, Illinois, to St. Louis in five hours and 18 minutes. She surpassed John Meyer's record of seven hours.²⁴⁵ In 1909, 14 year-old, Rosie Pitenhof, swam across Hull Gut, a difficult feat that many amateurs and professionals had failed to accomplish.²⁴⁶ In the same year, Adelaide Trapp was the first woman to swim Hell's Gate. She covered the distance in two and a half hours. Although 40 members of the United States Life Saving Corps also made the attempt, only 25 completed the distance. The annual swim was a test of endurance, not speed.²⁴⁷ The following year she repeated the feat with 29 Corps members; she remained the only woman to have swum the distance.²⁴⁸

²⁴²New York Times, August 29, 1904, 14.

²⁴³New York Times, September 10, 1906, 1.

²⁴⁴New York Times, Sept 21, 1906, 1.

²⁴⁵New York Times, July 13, 1908, 1.

²⁴⁶New York Times, July 14, 1909, 5.

²⁴⁷New York Times, September 6, 1909, 1.

²⁴⁸New York Times, January 10, 1910, 4.

More records were set in 1910. Eleanor Merton swam around Glen Island. The New York Times reported it as “a first,” but a reader claimed three other women had accomplished the feat in 1904.²⁴⁹ Rose Pitonof surpassed seven men when she swam nearly 17 miles in five hours and eight minutes.²⁵⁰ Hazel Laugenour swam the span of the Golden Gate Bridge in an hour and 28 minutes in 1911; the first woman to do this, she surpassed Edward Caville’s record by two minutes.²⁵¹ Alsie Aykroyd swam from the Charlestown Bridge to Boston Light in 7 hours and 12 minutes. Three men started with her, but quit; two were professionals. Only two persons had ever gone the distance.²⁵²

Women continued to demonstrate endurance, break records, and surpass men.²⁵³ Mostly teenagers, they were powerful swimmers. If they had competed in the 1912 Olympics, the U.S. Team would have won more gold medals. When they competed in the 1920 Olympics, the U.S. women proved themselves by winning four gold medals; in 1924 they set world records.²⁵⁴

²⁴⁹New York Times, June 20, 1910, 7; June 27, 1910, 6.

²⁵⁰New York Times, August 13, 1911, section 4, 6.

²⁵¹New York Times, August 20, 1911, 1.

²⁵²New York Times August 21, 1911, 9.

²⁵³New York Times, August 31, 1910, 12; October 2, 1910, section 4, 12; August 28, 1911, 5; September 4, 1911, 5.

²⁵⁴The Associated Press, Pursuit of Excellence, 26.

CHAPTER 11

PUBLIC BATHS FOR THE “UNWASHED MASSES”²⁵⁵

A demand for public bathhouses for the “unwashed masses” began in the 1840s with the great influx of immigrants into the cities. Many cities established free baths by the late 1870s as the need became urgent. Major U.S. cities were filthy especially when garbage or waste materials accumulated. Reformers worried that the “external filth” would lead to “internal uncleanness” in the form of illness, infection, disease, and immorality.²⁵⁶ Few people had water or bathing facilities in their living quarters; the slums were havens for epidemics. To curb disease and mortality, medical experts called for free neighborhood baths and wash houses. All citizens were expected to benefit. It was expected that the baths would help assimilate immigrants, diffuse middle-class standards, improve morality, and generally improve society. “Cleanliness is next to Godliness” became the motto of the middle and upper classes.²⁵⁷

While there was no unanimous agreement on the cause or spread of disease, some authorities thought human disease occurred with abrupt changes in temperature, a belief

²⁵⁵Chicago Tribune, July 4, 1969.

²⁵⁶New York Times, March 25, 1868, 4.

²⁵⁷Williams, Washing “the Great Unwashed.” 1-21; New York Times, May 4, 1866, 4; June 27, 1866, 2; March 25, 1868, 4; June 29, 1868, 5; June 22, 1871, 8; Chicago Tribune, July 4, 1869; July 19, 1879, 8; July 24, 1879, 8; See Jacob A. Riis, How the Other Half Lives: Studies among the Tenements of New York (New York: Charles Scribner’s Sons, 1890; New York: Dover Publications, Inc., 1971).

that lingered for decades.²⁵⁸ Some reasoned that disease came from foreign lands via incoming vessels, goods, or people.²⁵⁹ It was noted that a cholera epidemic was “chiefly confined to...immigrants, who became ill and died almost immediately on reaching the city.”²⁶⁰ One doctor suggested deadly germs could spread through body odor.²⁶¹ As scientific knowledge grew, the understanding of the spread of germs also grew.²⁶²

Graphic descriptions instilled fear of the unseen enemy. A doctor warned that “thousands of ugly, unclean worms...live and propagate in every organ and tissue of our frame.” The human body was “infested and profaned by hideous living parasites, that crawl on our surface, burrow beneath our skin, nestle in our entrails, run riot and propagate in every corner of our organization.”²⁶³ Authorities suggested the use of microscopes to check family food and water. At the least, homemakers were advised to cook pork until well-done and boil or filter water to get rid of “pests.”²⁶⁴ Cleanliness

²⁵⁸Peterson's, October, 1860, 319; Chicago Tribune, March 28, 1864; May 12, 1864; July 10, 1879, 12; Godey's, July 1870, 87.

²⁵⁹Chicago Tribune, September 3, 1873; May 10, 1879, 2.

²⁶⁰Chicago Tribune, January 11, 1864.

²⁶¹Williams, Washing “the Great Unwashed, 24.

²⁶²Peterson's, February 1873; Williams, Washing “the Great Unwashed, 24; F.E. Bruce, “Water Supply,” in A History of Technology, ed. Charles Singer (New York: Oxford University Press, 1958), 5: 561.

²⁶³Godey's, August 1869, 177.

²⁶⁴Godey's, February 1871, 92.

seemed a logical weapon against epidemics of diphtheria, cholera, and other diseases.

Fear of disease motivated the upper classes to action. Concerned that contact with employees, servants, laborers, or trades-people would transfer germs to their families, they reasoned that everyone's health was in jeopardy if the poor were not clean. Hygiene and grooming were of great importance to employers whose working class employees represented their interests. For that reason, some companies provided in-house bathing facilities.²⁶⁵

Nativism, a preference for "native-born" or "Americans" over immigrants, also influenced the public bath movement. The baths, when placed in immigrant neighborhoods, could be used to Americanize and assimilate immigrants. Although the public baths usually charged a rental fee for bathing suits, it was waived for certain ethnic groups because "we want to induce them to bathe."²⁶⁶ Reformers believed free baths for "foreign elements" would lead to cleanliness in homes, shops, and factories.²⁶⁷

Concern over public morality also generated support for free baths. Boys and men bathed nude in any available body of water. In the past, specific times or areas had been reserved for this activity. However, as cities grew, nude bathing prohibitions were

²⁶⁵ Williams, Washing "the Great Unwashed, 3; Susan Porter Benson, Counter Cultures: Sales Women, Managers, and Customers in American Department Stores, 1890-1940 (Chicago: University of Illinois Press, 1986), 130-131.

²⁶⁶ Josiah Quincy, "Playground, Baths and Gymnasia," Journal of Social Science, 36 (December 1898): 146; Williams, Washing "the Great Unwashed, 25.

²⁶⁷ Williams, Washing "the Great Unwashed, 25.

adopted for “public decency.” Nonetheless, males continued to bathe along the docks and wharves and eluded police as best they could.²⁶⁸ However, nude bathing was considered immoral, improper behavior; offenders were arrested, jailed, and fined. Two German immigrants, swimming in Lake Michigan, were fined a hefty \$12.00 for this infraction in 1870.²⁶⁹ As late as 1882, the police arrested men for bathing sans clothing.²⁷⁰

Physicians and health officials insisted that personal cleanliness was necessary to stop disease. Since the police arrested those who bathed in the river, it was reasoned that the city had to provide free, convenient baths to eliminate this quandary.²⁷¹ “Thousands of men who will not pay 25 cents at a bathing room would eagerly avail themselves to[sic] this privilege.”²⁷² Most New Yorkers carried water by hand from hydrants to their living quarters; likewise, waste water had to be hand-carried out. Under these circumstances, bathing was difficult.²⁷³ While support grew for public baths in the 1870s, authorities disagreed on what facilities should be included. Some wanted just the

²⁶⁸New York Times, June 27, 1866, 2; May 27, 1873, 4; Chicago Tribune, August 18, 1872; August 3, 1873, 12; August 17, 1873; July 22, 1876, 6; August 24, 1876, 8.

²⁶⁹Chicago Tribune, July 27, 1870.

²⁷⁰New York Times, June 20, 1882, 3.

²⁷¹Chicago Tribune, June 27, 1874, 5.

²⁷²Chicago Tribune, June 23, 1870.

²⁷³New York Times, June 29, 1868, 5; Chicago Tribune, June 27, 1874, 5.

essentials; others recommended swimming pools, gymnasiums, and laundries.²⁷⁴

Privately operated bathhouses had been available in the United States since the end of the 18th century. However, frequent bathing was generally not practiced until the 19th century when sauna, steam, vapor, mud, and swimming baths could be had for a price in most cities.²⁷⁵ Without running water, the portable bathtubs in some middle-class homes were inconvenient; thus, men often used private bathhouses.²⁷⁶ In 1868 a private bathhouse in Brooklyn included a variety of baths and accessories as well as a seven-foot-deep, 70-by-40 foot swimming bath. Servants or attendants assisted patrons; men and women had separate entrances and hours of admission.²⁷⁷

While most people believed baths were necessary, not everyone wanted to live near one.²⁷⁸ A stigma was associated with the bathhouses.²⁷⁹ In 1873 Mr. Shaw, a

²⁷⁴Williams, Washing "the Great Unwashed", 35; Chicago Tribune, June 17, 1874, 8.

²⁷⁵Siegfried Giedion, "The Mechanization of the Bath," Mechanization Takes Command: A Contribution to Anonymous History (New York: Oxford University Press, 1948), 659-81; Chicago Tribune July 21, 1872; July 20, 1872; August 15, 1873, 5; July 22, 1879, 11.

²⁷⁶Williams, Washing "the Great Unwashed", 11; Chicago Tribune, August 1, 1869.

²⁷⁷New York Times, July 19, 1868, 8.

²⁷⁸Chicago Tribune, August 24, 1869; July 19, 1873, 2; July 23, 1876, 3.

²⁷⁹This probably had some merit. An article in the New York Times (August 29, 1870, 5) noted that a murder involving a German "swimming-master" had occurred at the Allen Baths located at East 55th Street. The bathhouses often included music, dancing, and drinking.

photographer, proposed a bath on the Chicago lake shore. The city council approved his plans, but he also had to secure the approval of the adjacent residents. Six neighbors refused to give approval because they were concerned about having nude males behind their barns and feared that the baths might attract “common people.” Some saw no point in locating a bath in a neighborhood where everyone owned a bathtub. A physician, who supported bathing to eradicate disease, nevertheless objected to the bathhouse. Shaw had planned “a sumptuous bath with arm chairs and spittoons where the moral people of Chicago, who did not want to play billiards, could sit, smoke, spit or slumber.” Mrs. Shaw and female attendants planned to “guard” women patrons who would use the “pond” at specific times.²⁸⁰

By the end of the 19th century, many cities had established free European-style public baths. While the baths in Europe were established for the middle classes, the baths in the United States were primarily, but not exclusively, for the poor.²⁸¹ The first public baths were floating dock-like structures with dressing rooms along the sides and gaslights for night bathing. Used only in the summer, they were filled with river water. Policemen enforced the 20 minute time limits and prevented theft. Women “superintendents” managed the women’s program on the days set aside exclusively for

²⁸⁰Chicago Tribune, August 13, 1873, 3.

²⁸¹Williams, Washing “the Great Unwashed, 8-9.

females. By 1878 concrete pools began replacing the floating baths.²⁸²

Boston's public bath program was extensive and well-organized by the late 1860s. This did not go unnoticed by Chicago and New York.²⁸³ New Yorkers complained they needed similar facilities; they were "involuntary witnesses to [the] spectacle" of naked men and boys bathing in water "tainted with the filth of sewers."²⁸⁴

During the first year of operation of the Boston baths, they were used by 433,690 people. By 1898 approximately 700,000 to 1,900,000 people used the baths.²⁸⁵ The Boston program encouraged citizens to swim for cleanliness, physical fitness, and safety. Instructors went to the public schools to teach the children basic movements; swim contests stimulated interest in the program. Well-trained women attendants and medical personnel offered instruction and medical exams to women. The attendants came from the immediate neighborhoods; they knew the problems, language, and names of their patrons. Rental suits and towels were available; children's suits were free of charge. One

²⁸²Williams, Washing "the Great Unwashed, 17-18; Chicago Tribune, July 14, 1870; New York Times, September 1, 1878, 12.

²⁸³New York Times, June 28, 4 1866; Chicago Tribune, July 16, 1873, 3; June 17, 1875, 8; July 9, 1876, 16; July 15, 1876, 11; August 3, 1879, 3; August 17, 1879, 13; August 4, 1879, 4; Jane Stewart, "Boston's Experience with Municipal baths," American Journal of Sociology 7 (November 1901): 416-22.

²⁸⁴New York Times, July 12, 1868, 4.

²⁸⁵Williams, Washing "the Great Unwashed, 18; Stewart, "Boston's Experience with Municipal baths," 416-422; Josiah Quincy, "Playground, Baths and Gymnasia," 239; New York Times, June 28, 4 1866; September 1, 1878, 12; Chicago Tribune, July 16, 1873, 3; June 17, 1875, 8; July 9, 1876, 16; July 15, 1876, 11.

can vaguely gauge the number of bathers by the available rentals at one bath: 1,200 one piece girl's suits, 1,200 two piece women's suits, 1,800 two piece men's suits, 1,200 men's trunks, 3,600 boys trunks, and 15,000 towels.²⁸⁶

New York had a floating bathhouse in 1852.²⁸⁷ In the newer baths of 1870, 250 people bathed in each twenty-minute-period; nearly 10,000 people bathed on a given day. New Yorkers waited in long lines to access the popular baths, especially on Saturdays when men brought their sons. Clearly the bathhouse rules and regulations did not suit the boys, who were more interested in recreation than cleanliness. After visiting the baths out of curiosity, they soon reverted to the piers. Not only did they disliked the rules and required use of soap, but they were chastised when they tried to take the towels home. Editorials urged swimming baths along the river at half-mile intervals for the "high spirited" boys. It was reasoned that they would not give up the piers until they could swim at non-restrictive, well-located baths.²⁸⁸

As explained by a boy in 1873, the baths were places to get clean, not to have fun. Comparing his summer stay at a lake in Wisconsin with past visits to Chicago bathhouses, he noted his lake accommodations included "bathing houses, row boats, sail boats and a...steamboat." One could swim "just when you please. There ain't no police. There ain't no girls neither. We boys do just what we please. There's lots of boats, and

²⁸⁶Jane A. Stewart. "Boston's Experience with Municipal baths," 420.

²⁸⁷Williams, Washing "the Great Unwashed", 17.

²⁸⁸ Chicago Tribune, July 14, 1870; New York Times, May 24, 1872, 4; May 27, 1873, 4.

you don't have to pay....you can go in swimming with all your clothes off.”²⁸⁹ Some boys circumvented the 20 minute bathing limit by going from bath to bath “dirtying themselves” along the way.²⁹⁰

Although all of the New York baths were similar in design, their location gave them unique identities. The bath near the Bowery served the “pathetic multitudes” at the foot of Fifth Street and East River. The Charles Street Bath served “the American element” who were good swimmers. In three days, 1,600 women used the Charles Bath while the same number of women went through the East River facility in one day. The reported total attendance for both baths after 11 days of operation was 68,000 persons.²⁹¹

The woman who managed the East River Bath in Harlem “received constant expressions of thanks from the mothers.” Before the bath opened, the women carried water from the river to bathe their babies. They lived in neat brick flats and were not of “extreme poverty” like those from the tenements. Most worked in near-by stores and factories, although some were “cottage residents” of “comfortable means.” Expert swimmers were among the “constant stream” of women.²⁹²

The 37th Street and East River Bath attracted more women than the others baths. Attendance ranged from 2,000 to 3,000 per day. Housekeepers and school girls came

²⁸⁹Chicago Tribune, August 31, 1873, 5.

²⁹⁰Williams, Washing “the Great Unwashed, 19; Chicago Tribune, July 17, 1880, 3.

²⁹¹Chicago Tribune, July 14, 1870.

²⁹²Chicago Tribune, July 8, 1877, 11.

very early; mothers and babies came about 8 AM or 9 AM. Few came between 9 AM to 3PM except women from “aristocratic neighborhoods” who could “command their own time.” These women, according to the Chicago Tribune correspondent, were sensible, democratic women who traveled 30 or 40 blocks to bathe and swim during their allotted time. High spirited girls came after school; women from neighborhood factories or those with young children came from 6 PM to 9 PM.²⁹³

The 51st Street and North River Bath attracted workers from the near-by factories, including one which employed 1,800 young women. The bath supervisor preferred working women over the schoolgirls who had to be watched constantly. The girls were fearful during their first attempts to swim, but became confident after a few days. The Bethune Street and North River Bath was reserved from 5 PM to 6 PM for “a dozen or two expert swimmers.” These women, with bodies like “antique statues,” reflected “perfect health of mind and body.” They practiced difficult routines including underwater swimming, “aquatic gymnastic,” diving, and racing. The working women supplied their own bathing suits and towels.²⁹⁴

By 1888 New York’s 15 floating baths were used by an average of 2.5 million males and 1.5 million females annually. Unlike those of the East Coast, the Chicago public baths were usually modest buildings without swimming pools. Built in ethnic neighborhoods, they, too, were reserved for women on certain days. As was the case in

²⁹³Chicago Tribune, July 8, 1877, 11.

²⁹⁴Chicago Tribune, July 8, 1877, 11.

other cities, the use of the baths declined with the advent of home bathing facilities. Citizens preferred the outdoor pools and bathing beaches along Lake Michigan.²⁹⁵

Many smaller towns built bathing and swimming facilities by the turn of the century. Curt Teich traveled by train throughout the country taking photographs which he converted into postcards. His cards often featured a town's most prized buildings: libraries, city halls, churches, banks, retail establishments, and swimming pools. Indoor and outdoor "concrete swimming baths" or "tanks" were found in diverse places such as Hutchinson, Kansas; Columbus, Ohio; Waco, Texas; Erie, Pennsylvania; West Baden, Indiana; Joplin, Missouri; and Alhambra, Montana.²⁹⁶

Most residents of large cities in the 1880s sponge-bathed at home; few owned bathtubs until the 20th century.²⁹⁷ While home facilities increased over time, the American Medical Association reported in 1887 that only 23% of the residences in eighteen major cities had bathtubs. In 1893 less than 3% of Chicago and New York residents had bathrooms. In 1904, nearly 4 million people bathed at the year-round bathing facilities in cities with large foreign-born populations. Of this number, over 1.5 million patronized baths with swimming pools.²⁹⁸ If outdoor and summer facilities are

²⁹⁵Williams, Washing "the Great Unwashed", 19, 88, 95, 130.

²⁹⁶The Curt Teich Postcard Archive, Lake County Museum in Wauconda, Illinois. #A36, #A4004, #A5974, #A7809, #A11370, #A20903, #A26234.

²⁹⁷Giedion, "The Mechanization of the Bath," 628-712.

²⁹⁸Williams, Washing "the Great Unwashed", 29, 38.

added to this number, it is a safe estimate that millions of Americans were swimming by the 20th century.

When rental and housing laws changed after the turn of the century, builders included bathtubs with the required toilets. Public bathhouse attendance declined; some changed their emphasis to recreation, education, and health care. The public bath movement had peaked in 1910 and declined after 1915. It had achieved its goal of promoting the “gospel of personal cleanliness.”²⁹⁹ Moreover, thousands, if not millions, of women and girls had learned to swim at these facilities. Although the baths were established for the benefit of the lower classes, as we have seen, people of all classes bathed and swam there.

²⁹⁹Williams, Washing “the Great Unwashed, 65, 75, 81-82.

CHAPTER 12

FABRICS FOR BATHING AND SWIMMING ATTIRE

As “sea-bathing” moved from medically encouraged “cleansing” and “healing” to recreation and competitive sport, contradictory concerns of health, modesty, fashion, aesthetics, safety, and practicality influenced the design of the garments and choice of fabric for bathing and swimming. Although the use of wool and other hair fabrics was constant, the structure of the fabrics changed during the last quarter of the 19th century. The use of silk, cotton, and linen fibers was infrequent in the 1850s but increased with time. Improvements in knitting technology led to the widespread use of knits by the end of the century.

The initial preference for protein fibers over cellulose was tied to 19th century medical theories. The hygroscopic character of wool, silk, and other hair fibers allowed for significant absorption of moisture without the feeling of wetness.³⁰⁰ Protein fibers also are non-conductors of heat, thus fabrics made of them tend to trap body heat. In the 19th century, physicians and the public believed that maintaining body heat protected against illness. On the other hand, cotton and linen fabrics conducted heat away from the body; thus, they were thought to promote chilling. This, supposedly, led to disease and death.³⁰¹ Doctors also cautioned against sudden extremes of temperature; uneven body

³⁰⁰Sara J. Kadolph, Anna L. Langford, Norma Hollen and Jane Saddler, Textiles, 7th ed. (New York: Macmillan Publishing Company, 1993), 42-47; 54-65.

³⁰¹Peterson's, October 1860, 319; Harper's Bazar, August 8, 1868, 643.

temperature of hands, arms, or shoulders was thought to lead to colds and “habitual irritation in the throat.”³⁰² However, other medical experts of the era also stressed the importance of fresh air, sunlight, and exercise to improve health; therefore, going to the seashore for bathing and swimming were promoted.³⁰³ Bathing garments made of wool or hair fiber helped to satisfy both medical opinions.

The most frequently cited fabrics for use in bathing costumes from the 1850s to 1900 were similar to those used for outerwear: flannel, worsted, serge, moreen, French merino, cheviot, mohair, farmer's satin, alpaca, cashmere, brilliantine, gloria, and cravenette (see Glossary). There were several basic requirements of bathing garments worn in public: they should be made of wool to prevent chilling, repel water, and conceal the outline of the body. Wool flannels were recommended for warmth, but they had the disadvantage of clinging to the body when wet. Worsteds, such as serge, were recommended because they did not cling when wet; however, they were considered “cold,” probably because of their hard surface. The debate concerning which of the two fabrics was superior for use in bathing costumes continued throughout the period.³⁰⁴

³⁰²Godey's, June 1869, 551; July 1870, 87; Peterson's, March 1869, 249.

³⁰³Peterson's, October 1852, 232-235; April 1860, 335-336; Rice, A Brief History of Physical Education, 95, 107-108; Godey's, October 1855, 245-246; August 1858, 123-125; July 1870, 87; Godey's, June 1872, 547. In the short story, “A Month at Rye Beach” by Mary W. Janvrin, a month of fresh sea air was prescribed to improve the health of a young woman.

³⁰⁴Peterson's, August 1856, 145; July 1880, 84-85; Godey's January, 1858, 68; July 1871, 43-45; Harper's Bazar July 29, 1871, 467; July 25, 1874, 475; July 17, 1875; July 20, 1878, 459; July 17, 1880, 451; July 3, 1897, 543; The Delineator, June 1897, 664.

Some of the recommended fabrics were woven of two types of yarn containing different fibers. Various authorities felt these “mixed fabrics” were unfit for bathing costumes because of differential shrinkage which caused them to pucker. However, many late 19th century fabrics were mixtures of wool, silk or cotton. Cotton warp was often used with expensive hair fiber in the filling. This reduced the cost of the fabrics while retaining many of the desirable properties of the expensive fiber. Additionally, it increased the strength of the fabric; cotton became stronger when wet while wool weakened. Silk was also used for warp, but not as effectively as cotton. Common examples of mixed fabrics used in bathing costumes included mohair and brilliantine.³⁰⁵

As early as the 1870s, cotton bed-ticking was recommended for bathing costumes. In time, other cotton fabrics such as Turkish toweling, poplin, sateen, denim, and drill were also used. Textured wovens such as honeycomb, waffle weave, and huck were noted in the 1880s.³⁰⁶ Silk also gained favor by the end of the 19th century. Originally used for trim, silk fabrics composed entire suits by 1890. Technological improvements led to increased domestic production of silk fabrics, which were made from imported raw silk. Increased consumption soon followed.³⁰⁷ However, silk remained an extravagance

³⁰⁵Godey's, July 1871, 43-45; The Delineator, May 1894, 454; George S. Cole, Cole's Encyclopedia of Dry Goods (New York: The Economist Press, 1900), 363; 365; 471; Kadolph, Textiles, 25.

³⁰⁶Peterson's, August 1870, 147; Harper's Bazar, July 26, 1873, 466, 467; July 17, 1880, 451; July 3, 1897.

³⁰⁷Cole, Encyclopedia of Dry Goods, 508-509.

because it did not wear well. Silk bathing costumes were favored by upper class women at the turn of the century. Taffeta, rep, surah, satin, pongee, grosgrain, faille, peau de soie, moire, poplin, and serge were some of the silk fabrics used for bathing costumes.³⁰⁸

Knit fabrics were significant in the development of functional swimwear.

Hundreds of patents were issued for knitting machinery, technology, or improvements in fabrics during the first three-quarters of 19th century.³⁰⁹ Machine produced knits were available early in the 1800s when Mennonites in Pennsylvania established a knitting industry using frames brought from Germany. Others knitting mills, including one that produced high quality, full-fashioned cotton hosiery, were established by 1845. Several mills produced fancy stockings by 1860. However, many women continued to hand-knit substantial amounts of apparel even though stockings, underwear, and other knit items were increasingly mass-produced. By 1875, most people living in the cities purchased machine-made knit goods, while rural women continued to hand-knit stockings.

Improvements in circular knitting machines significantly decreased the cost of stockings, making hand-knitting impractical. Manufactured knits were available in cotton, silk, linen, wool, or mixtures. Ribbed knits, introduced in 1885, had great elasticity which

³⁰⁸The Delineator, May 1894, 454; August 1895, 222; May 1897, 545, 549; June 1897, 664-665; May 1897, 549, 545; Harper's Bazar, August 7, 1880, 501; July 5, 1890; August 1, 1891; July 9, 1892; July 29, 1893, 607; July 3, 1897, 543; March 30, 1901, 858-859; July 1912, 350; July 1913, 36.

³⁰⁹United States. Index of Patents Issued from the United States Patent Office from 1790 to 1873, 803-806.

allowed for contraction and expansion. Knits were ideal for bathing trunks or tights which were worn by many athletes, including swimmers.³¹⁰ One can gauge the increasing use and popularity of knits by considering their share of total apparel production as documented in the U.S. Census of Manufactures statistics from 1869 to 1909. Although knit production was not of sufficient quantity to be listed in 1869, it was valued at \$29,167,00 by 1879; \$67,241,000 by 1889; \$95,833,000 by 1899; \$200,143,000 by 1909; and \$713,139,000 by 1919, when it accounted for 13% of total apparel production.³¹¹ Knit fabrics and related technology played a significant role in the development of functional swimwear.

³¹⁰F. A. Wells, "Hosiery and Lace" in A History of Technology, ed. Charles Singer (New York: Oxford University Press, 1958), 5: 595-600; Cole, Encyclopedia of Dry Goods, 20-24, 291-292, 296, 524-525; Verla Birrell, The Textile Arts: A Handbook of Weaving, Braiding, Printing, and Other Textile Techniques (New York: Schocken Books, 1973), 298-307; Sears Roebuck & Co., Catalog, #104, 1897; The Delineator, August 1877, 100; Richard Rutt, "The Englishman's Swimwear," Costume, 24 (1990): 72.

³¹¹Paul H. Nystrom, Economics of Fashion (New York: The Ronald Press, 1928), 406.

CHAPTER 13

“CUT OUT THE SLEEVES”

As soon as women's bathing costumes began appearing in the periodicals of the 1850s, comments regarding their deficiencies quickly followed. Women's functional swimwear progressed from the bloomer costumes of the 1850s to the widely popular “tank suit” of the 1920s (see Figures 5 through 28). Some men's bathing and swimming garments are also included in the illustrations. Men and women's bathing costumes were quite similar in the 1860s. As more men engaged in competitive swimming, their costume became briefer and lighter; this phenomenon also occurred in women's swimwear. With improved technology, knit suits were favored; however, garments made from woven fabrics were never completely abandoned. Whether knitted or woven, swimwear became lighter and more practical by 1900.

The first reference specifically to women's bathing costume was found in the August 1856 edition of Peterson's. The costume, a pair of “drawers” and a “skirt,” was made from grey, dark blue, or brown flannel. The full drawers were gathered at the ankle and attached to a wool “body.” For modesty they were “fasten[ed] in a way that even if the skirt washes up the person cannot possibly be exposed.” The skirt, which really was an elongated, belted dress, ended three inches above the ankle. The sleeves were gathered at the wrist to protect the skin from the sun. Bathing garments were deemed “generally very unbecoming.” To hide the figure, it was recommended that a



Figure 5. Bloomer Costume from Godey's, January 1858, 68.



Figure 6. Bloomer Costumes from Godey's, July 1864, 21.



Figure 7. Men and Women at Cape May from Peterson's, August 1866.

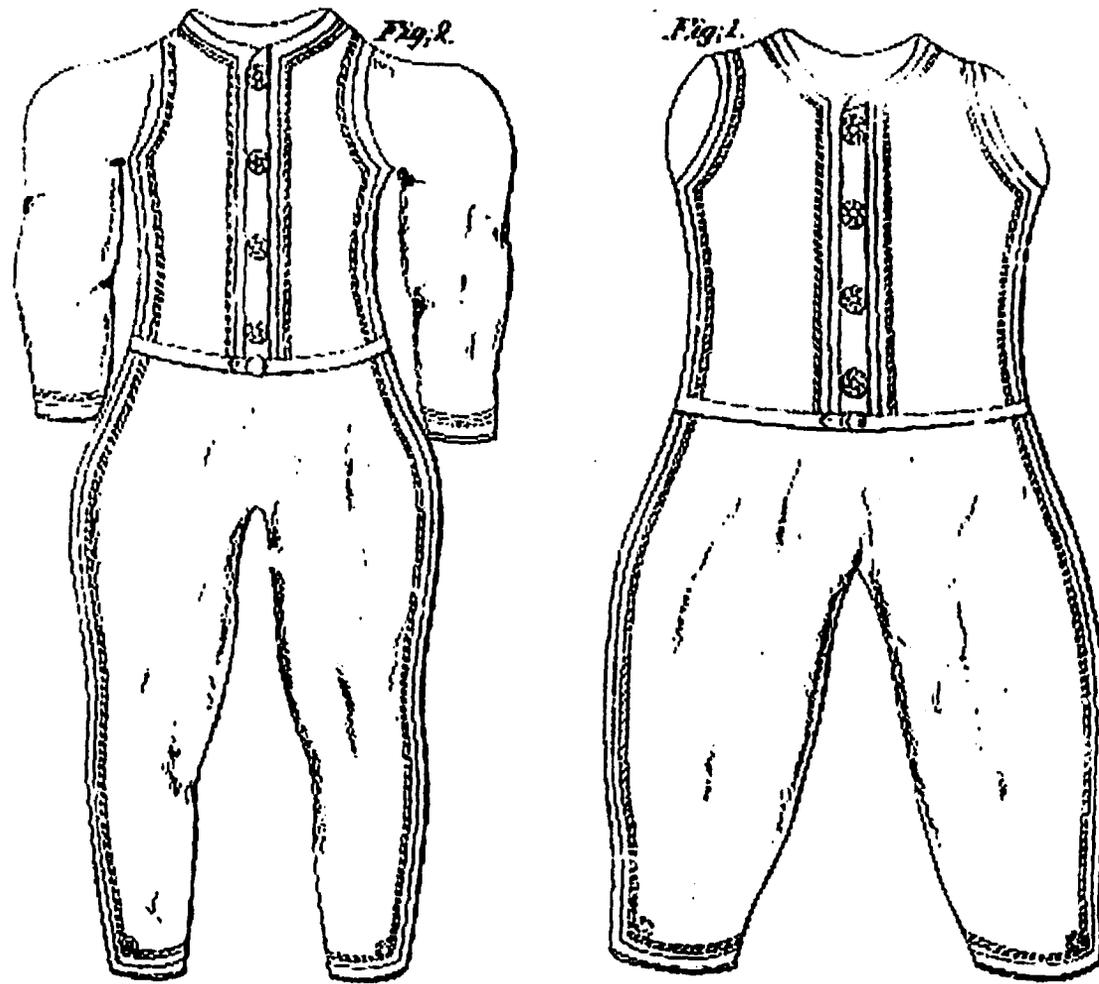


Figure 8. Azias Morse's Unisex Bathing-Dress, USP 87,107 (1869).



Figure 9. French-style Swim Suit from Peterson's July 1869, 67.

Fig. 1.



Fig. 3.

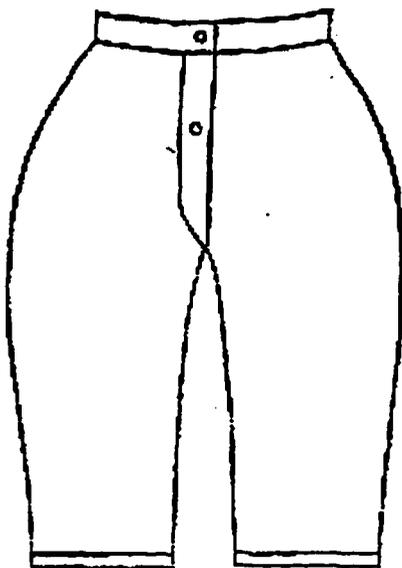


Figure 10. French-style Swim Suit from Godey's, July 1871, 43.



The Bather by Frederick S. Jones, 1879

Figure 11. The Bather, circa 1879, from Rinhart, Summertime, 6.



Figure 12. Gentleman in Bathing Dress, circa 1888, from Rinhart, Summertime, 17.



Figure 13. Women in Swimming Suits from Harper's Bazar, August 18, 1883, 525.

Holmes & Co.

JERSEY BATHING SUITS

READERS IN VICINITY OF BOSTON CALL & EXAMINE.

TAKE ELEVATOR SEND STAMP FOR CATALOGUE.

109 Kingston St BOSTON MASS.

FULL TIGHTS FOR BATHING

A black and white woodcut-style illustration for an advertisement. A man stands in the center, wearing a dark, short-sleeved, button-down bathing suit. He has his left hand on his hip and is looking towards the viewer. To his right, a sign reads '109 Kingston St BOSTON MASS.' To his left, another sign reads 'FULL TIGHTS FOR BATHING'. In the foreground, there is a pair of dark, full-length tights hanging from an unseen point. The background consists of horizontal lines, suggesting a wall or a simple backdrop. The overall style is characteristic of late 19th-century magazine advertisements.

Figure 14. Advertisement from Harper's Bazar, June 7, 1890, 523.

(Specimens.)

M. ORR.

KNITTED UNDERGARMENT.

No. 412,784.

Patented Oct. 15, 1889.

FIG. 1.

FIG. 2.

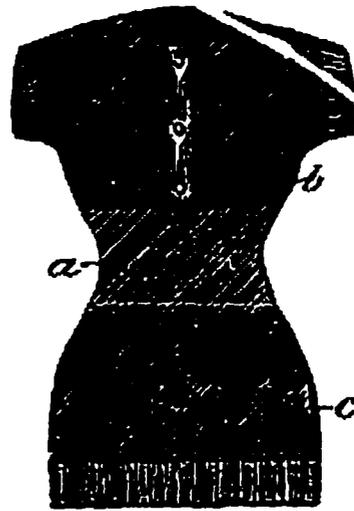
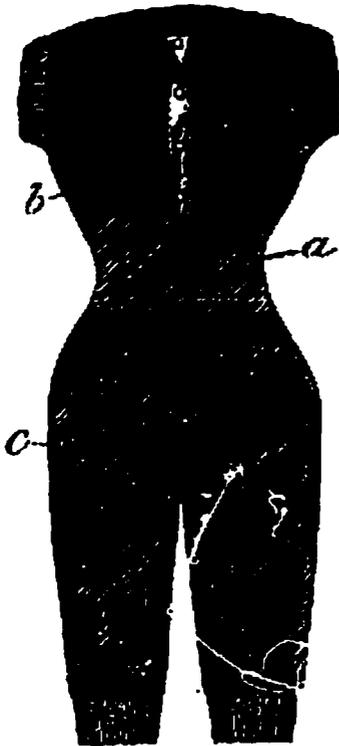


FIG. 3.

Figure 15. Margaret Orr's Knitted Undergarment, USP 412,784 (1889).

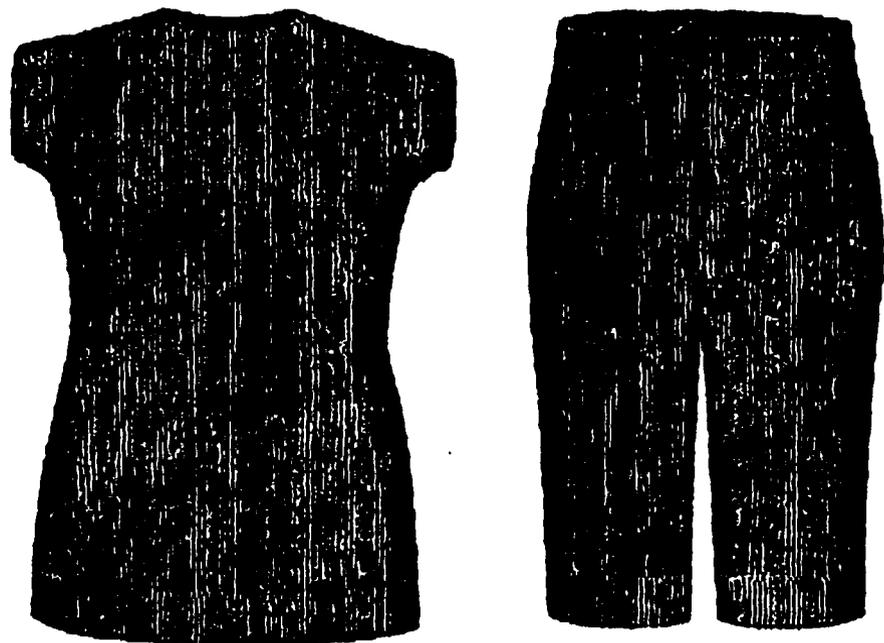


FIGURE NO. 6

FIGURE NOS. 6 AND 7.—GENTLEMEN'S BATHING SUIT

FIGURE NO. 7

Figure 16. Gentleman's Bathing Suit, The Delineator, August 1887, 106.



Figure 17. A Boardwalk Portrait, circa 1885, from Rinhart, Summertime, 41.



Figure 18. Men's Bathing Suit, Reprint from Bloomingdale Illustrated 1886 Catalogue, 22.

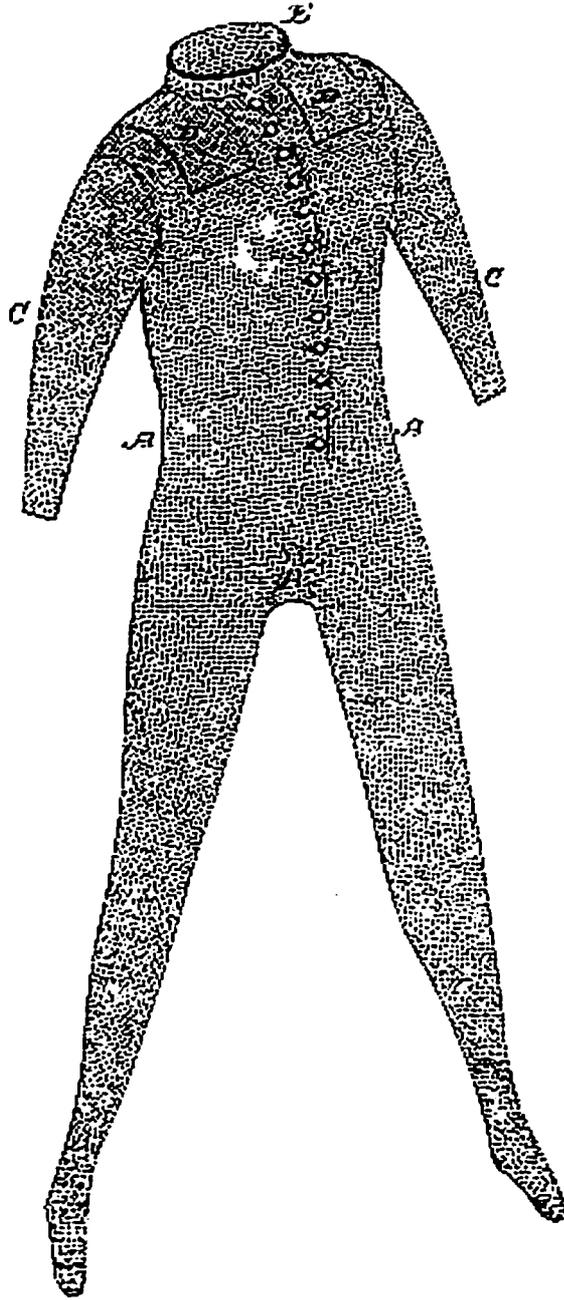


Figure 19. J. J. Pfister's Bathing Suit, USP 318,133 (1885).

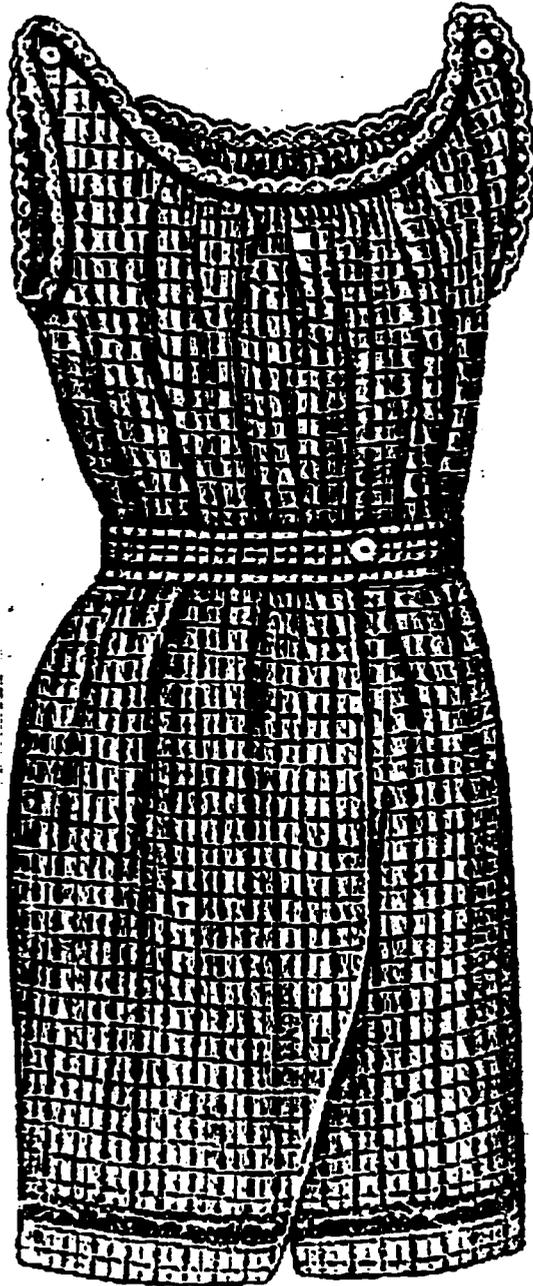


Figure 20. Lady's Swimming Dress from Harper's Bazar, July 6, 1889, 492.



Figure 21. Lady's Swimming Suit from *Harper's Bazar*, July 4, 1891, 516.

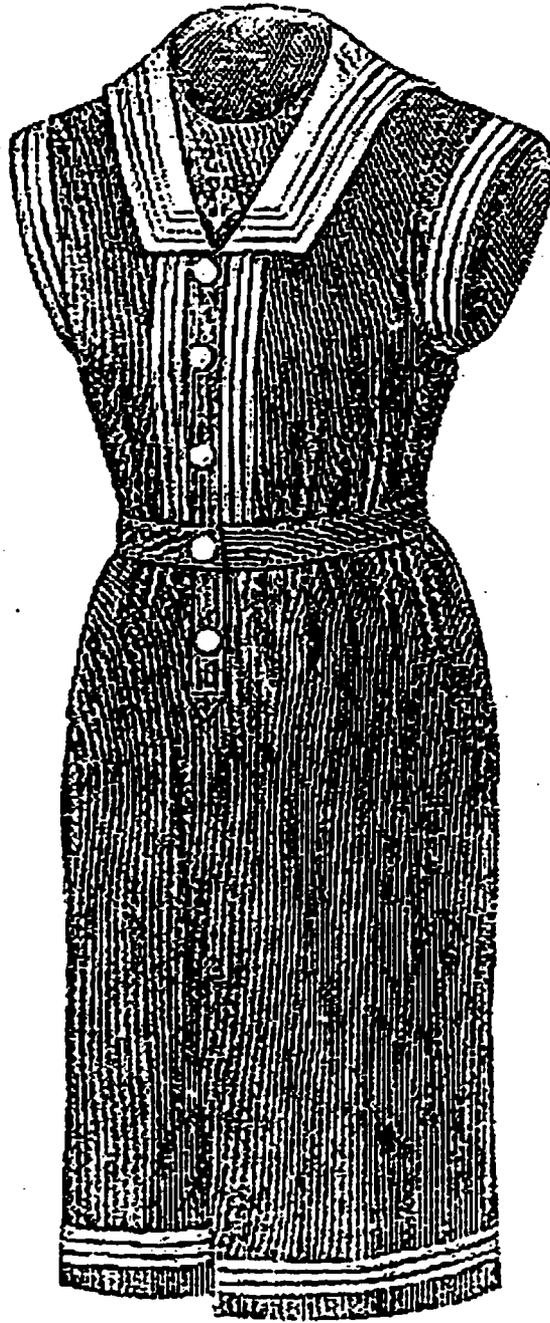


Figure 22. Lady's Swimming Suit from Harper's Bazar, July 4, 1891, 516.



Figure 23. Lady's Swimming Suit from Harper's Bazar, June 10, 1893, 23.

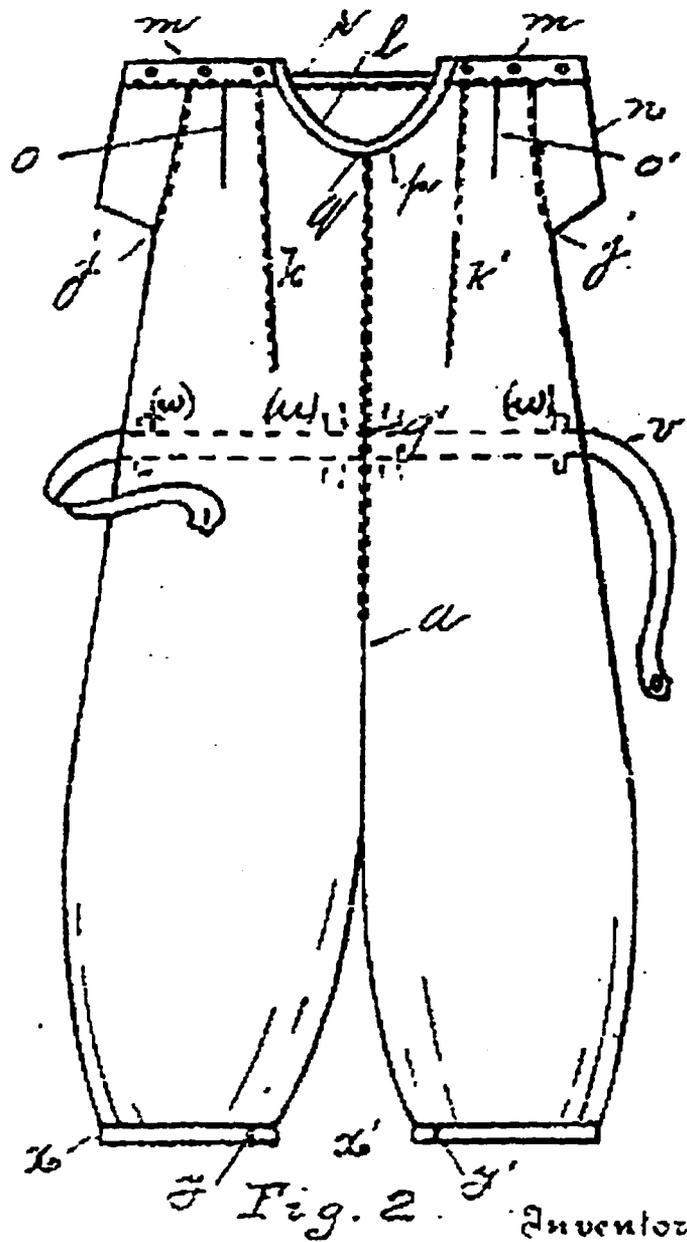


Figure 24. Jannette Bullis' Bathing Suit, USP 873,713 (1907).



Figure 25. Rose Pinoff in Tank Suit, New York Times, July 23, 1911, section 5, 14.

BATHING SUITS

Any Style Furnished with Either Quarter Sleeves or Sleeveless Shirt

No. 600
Two piece Cotton Bathing Suit in Navy Blue with either red or white trimmings; plain pants. Sizes 38 to 44.
No. 600. Men. \$1.00
Two piece finest quality Cotton Bathing Suit, trimmed with Navy and White or Navy and White only. Sizes 38 to 44.
No. 600. Per suit, \$1.00

No. 600
Two piece Cotton suit, Navy shirt and pants trimmed with white or red stripes. Sizes 38 to 44.
No. 600.
Per suit, \$1.00
Finest quality Cotton, two piece suit, with microscoped silk trimmings. Fashioned to stripe of body. Made in following colors only: Navy, trimmed Red; Navy, trimmed White. Sizes 38 to 44.
No. 600. Per suit, \$1.00

No. 110
Worsted, full fashioned, best quality, in Navy, Black or Maroon. Sizes 38 to 44.
No. 110.
Per suit, \$4.50

No. 111
Striped Worsted, same quality as our No. 110, with stripes around sleeve and bottom of shirt and pants. Sizes 38 to 44.
No. 111. Per suit, \$5.00

No. 600
Cot Worsted, fine quality two piece suit, in Navy, Black or Maroon. Sizes 38 to 44.
No. 600. Per suit, \$2.00

No. 87
Finest quality Worsted, full fashioned two piece suit with microscopically striped. Made in following colors only: Navy, trimmed Gray; Gray, trimmed Red; Navy, trimmed White; Navy, trimmed Red. Sizes 38 to 44.
No. 87.
Per suit, \$2.75

No. 814
Fine quality two piece Worsted suit, fashioned, trimmed, neck and pants. Colors: Navy and Red or Navy and White only. Sizes 38 to 44.
No. 814. Per suit, \$3.00

No. 401
Fine quality two piece Worsted suit, shirt and pants trimmed, colors as follows: Navy and White; Navy and Red; Black and Red; Gray and Cardinal. Sizes 38 to 44.
No. 401.
Per suit, \$2.75

No. 100
Finest quality full fashioned Worsted two piece suit. Colors: Gray and Red; Navy and White; Black and Orange only. Trimmed shirt and pants. Sizes 38 to 44.
No. 100. Per suit, \$3.75

No. 742
One piece Bathing Suit, men's sizes, 38 to 44 in chest; fancy stripes, or sorted patterns; button in front.
No. 742.
Per suit, 75c.

No. 821B
Boys' sizes, 24 to 32 in. chest; fancy stripes; variety of patterns; button in front.
No. 821B.
Per suit, 75c.

No. 50
One piece Sleeveless Cotton Bathing Suit, solid Navy Blue; button at shoulder.
No. 50. Per suit, 75c.

Figure 26. Bathing Suits from A. G. Spalding's Sports Catalog, 1904.



Figure 27. Postcard #A86520, 1921. The Curt Teich Postcard Archives.



Figure 28. Postcard #A86529, 1921. The Curt Teich Postcard Archives.

cape be worn.³¹² The described garment probably was a simplified version of the “bloomer” costume of the 1850s (see Figure 5).³¹³ The fashionable bathing dresses of 1864 did resemble the bloomer costume (see Figure 6). Blue and black flannel were the preferred colors but “pearl” and scarlet were also acceptable.³¹⁴ Men’s bathing costumes were made of similar fabric, but were less full, shorter, and usually sleeveless (see Figure 7).³¹⁵ Some men’s bathing suits in the 1870s were short belted blouses and trousers of blue or grey flannel.³¹⁶ Others resembled a “student’s blouse” which ended at the knee.³¹⁷ Male swimmers reportedly favored a costume of “shirt and knee-breeches.”³¹⁸

There was growing recognition that swimming garments should be different from bathing costumes. In 1869 a report from a Virginia resort noted that a competent swimmer, a “lovely girl, the most vigorous dancer at the biggest hotel,” swam beyond the surf in “a free and not cumbersome suit of light blue.”³¹⁹ This would not have been the typical, clinging flannel bathing suit which became awkward and heavy when wet.

³¹²Peterson’s, August 1856, 145.

³¹³Peterson’s, November 1851, 174; Godey’s January 1858, 68.

³¹⁴Godey’s, July 18, 1864, 21, 95.

³¹⁵Peterson’s, August 1866.

³¹⁶Harper’s Bazar, July 30, 1870, 483.

³¹⁷Harper’s Bazar, July 29, 1871, 467.

³¹⁸New York Times, July 24, 1876, 8.

³¹⁹Chicago Tribune, August 27, 1869.

As noted in the previous chapter, there was a constant and an overriding concern that bathing costumes might reveal too much of a woman's body. A male correspondent considered this an opportunity; he urged young men to visit the beach to observe "what they were marrying." The flannel bathing dresses revealed women's "frailties" and most women would not "fill the measure of a strong man's arms." Reportedly, some women also wore "stiff corsets" thus took their "disguises" into the water.³²⁰

Azias Morse's close-fitting, one-piece, unisex bathing garment of 1869 was designed to prevent "water [from] gather[ing] in the folds" (see Figure 8).³²¹ Because it required less material, it would not impede the swimmer and would be cheaper to make. The upper garment resembled "a well fitting undershirt" which opened to the waist; from the waist down, it resembled drawers without an opening.

Women's bathing costumes remained unchanged until the late 1860s when imported Parisian suits featured a short-sleeved, shorter jacket worn over close fitting trousers which were open at the ankle (see Figure 9). They were recommended for swimmers "who do not wish to be encumbered with bulky clothing." A chemise or blouse could be worn under the jacket to protect exposed skin. The streamlined costume was criticized as being too "masculine and fast," nevertheless, Harper's Bazar noted that the garment "did not expose the figure more than a wet clinging robe" and was "more

³²⁰Chicago Tribune, August 15, 1871.

³²¹Azias Morse, "Improved Bathing-Dress," US. Patent 87,107 (February 23, 1869).

comfortable in the water where all superfluous drapery should be dispensed with.”³²² A Parisian swim club also encouraged women to wear more “appropriate,” close-fitting garments that “show[ed] the figure to advantage while remaining decent and modest.” The garment was “tight...short, not lower than the knee.” It was a compromise between the French jockey’s and English prize fighter’s costume.³²³ In 1871 Godey’s recommended a French style two-piece garment for swimmers (see Figure 10). The top, designed with deep armholes, could be made with sleeves or sleeveless. Knee length in front, it was slightly longer in back. The close-fitting trousers did not impede the legs.³²⁴

In 1875 Harper’s Bazar noted that “many ladies cut out the sleeves of their bathing suits” because they became heavy and impeded movement of the arms while swimming.³²⁵ The flannel swim suits for men were made similar to one-piece sleeping garments of children (see Figures 11 and 12).³²⁶ The women’s new one-piece styles had abbreviated sleeves, loose trousers, and detachable overskirts that buttoned at the waistline. They offered “coolness and freedom.” Detachable sleeves were recommended

³²²Peterson’s, July 1869, 67; Harper’s Bazar, August 8, 1868, 643; July 10, 1869, 435.

³²³New York Times, August 9, 1869, 2; Peterson’s, August 1870, 147.

³²⁴Godey’s July 1871, 43.

³²⁵Harper’s Bazar, July 17, 1875, 459.

³²⁶Harper’s Bazar, July 30, 1870, 483; July 25, 1874, 475; July 1, 1882, 403.

for those who did not want to expose their arms and shoulders to the sun. The suits were popular with “expert swimmers”(see Figure13).³²⁷

Unfortunately, few details were reported about the attire worn by girls and women in swim competitions back in 1872. One participant reportedly wore a “sailor’s suit,” the others wore “colorful suits.”³²⁸ In 1873 women competitors wore “ordinary bathing suits.”³²⁹ The daughters of the bathhouse owners may have worn garments like those of the swim instructors or other patrons of the bathhouse. Or they may have worn the Parisian inspired suits discussed earlier.

Kate Bennett, a public bath instructor in 1874, taught hundreds of women to swim in “proper costume.”³³⁰ When she and her students gave a demonstration in 1874, they wore garments that were “light and easy giving full opportunity for the play of the limbs.”³³¹ Agnes Beckwith also wore a “light swimming dress” when she swam six miles from the London Bridge to Greenwich in 1875.³³² Emily Parker wore “appropriate costume” for her long swim that year.³³³ Without more information, it is difficult to

³²⁷Harper’s Bazar, July 19, 1879, 455; July 17, 1880, 451; July 1, 1882, 403.

³²⁸New York Times, August 11, 1872, 8.

³²⁹New York Times, July 27, 1873, 5.

³³⁰New York Times, July 10, 1874, 5; Chicago Tribune, August 27, 1874, 8.

³³¹Chicago Tribune, September 12, 1874, 9.

³³²New York Times, Sept 18, 1875, 10.

³³³New York Times, September 20, 1875, 2.

interpret the 19th century definitions of “light,” “ordinary,” “proper,” and “appropriate.” However, better descriptions became available in the late 1870s.

By 1869 knit technology had progressed to the stage that a pair of seamless stockings could be made in minutes; stitching was required only at the heel and toe.³³⁴ Thus, the “simple” garments worn by the women may have been knitted tights similar to those worn by women in circus and theater troupes. An actress, Adah Isaacs Menken, wore flesh-colored tights when playing male roles in the 1860s. Knitted tights were often worn by actresses to portray soldiers and “water nymphs.”³³⁵ Competitive women swimmers or those who considered themselves performers may have copied this custom.

The bathing costumes of “utmost simplicity” recommended by Kate Bennett in 1877 may have been a form of tights or simple knitted garment.³³⁶ In August of 1877, Eliza Bennett swam across the Hudson River “dressed in orange colored tights of the finest silk which fitted her like a glove.” There was no ambiguity in this report.³³⁷ Likewise, the garments worn by Kate Bennett’s students in 1878 sound very much like

³³⁴ Chicago Tribune, September 12, 1869.

³³⁵ Banner, American Beauty, 118-119; Chicago Tribune, May 6, 1879, 5; May 9, 1879, 5; Cole, Encyclopedia of Dry Goods, 549. In 1900 Cole defined tights as a close fitting, knit garment that displayed the figure or facilitate movement of dancers, acrobats, or gymnasts. Usually made of cotton, wool, or silk, some covered the feet while others, such as those for swimming and other sports, extended only to the knees. Tights, cut to fit snugly from the ankles to waist, were also worn by women’s during the winter.

³³⁶ New York Times, September 14, 1877, 2.

³³⁷ New York Times, August 24, 1877, 8.

knits. They were “brightly-colored tight-fitting bathing costumes, cut off at shoulders and knees” for freedom of action. Little Cherry Frolich resembled a diminutive gold fish in her “closely-fitting cherry-colored suit” which exposed her arms and legs.³³⁸

Women who bathed at the public baths in 1877 were not allowed to wear garments that had skirts. “The favorite dress is a single garment, with openings for the lower limbs, arms, and head to pass through, reaching about half way to the knees, with arms and neck bare and a button fastening the garment at the back of the neck.”³³⁹ In order to fit women of various ages and sizes, it is possible they may have been made of knit. Specifics were not offered for the “modest and becoming bathing suits” worn by Kate Grant’s students during an exhibition in August of 1879.³⁴⁰ However, since her school was either at a public or private bath, the suits may have been similar to those worn at the other baths.

The size of the bathing dress worn by male swimmers diminished over time. In the mid 1870s, competitive swimmers greased themselves with oil and wore brief costumes for their matches.³⁴¹ Captain Webb swam from Dover to Calais wearing only bathing drawers; he covered his body with “dolphin oil to close his pores to the cold.”³⁴²

³³⁸New York Times, September 1, 1878, 12.

³³⁹Chicago Tribune, July 8, 1877, 11.

³⁴⁰New York Times, August 23, 1879, 8.

³⁴¹New York Times, July 22, 1876, 2.

³⁴²Chicago Tribune, August 30, 1875, 2.

Frederic Cavill, swam in “a tight gauze[sic] jersey” and covered himself with porpoise oil.³⁴³ Two other men wore “the lightest of swimming trunks” for their competition in 1877.³⁴⁴ By 1880, two competitors greased themselves and wore nothing but colorful hats to compete in a race of 25 miles.³⁴⁵ In the late 1880s, amateur male competitive swimmers wore trunks only.³⁴⁶

When Agnes Beckwith swam in the whale tank for 30 hours in 1880, she wore a black and crimson silk costume.³⁴⁷ Since she was performing, her costume may have been knitted tights. In 1883 Agnes wore flesh colored tights and a low-neckline bodice under her sailor suit. Her brother also wore tights under his sailor suit; both removed their suits while in the water.³⁴⁸ A one-piece, tight fitting “stockinette costume,” which was worn over corsets, was available to English women swimmers.³⁴⁹

When six young women, swam for male friends in 1883, all but Miss Bently wore “close fitting” suits which may have been tights or other knit garments. Miss Bently wore

³⁴³New York Times, July 22, 1876, 2.

³⁴⁴New York Times, September 17, 1877, 8.

³⁴⁵New York Times, August 23, 1880, 5.

³⁴⁶New York Times, August 22, 1889, 2.

³⁴⁷New York Times, May 22, 1880, 2.

³⁴⁸New York Times, June 5, 1883, 2; June 9, 1883, 2.

³⁴⁹Peggy Heinrich and Ray J. Worssam, “Bathing Machines Brought Elegance to Skinny Dipping,” Smithsonian 5 (July 1974): 57-61.

a “common loose bathing dress” which caused her to lose the race although she led in the beginning.³⁵⁰ The knitted undergarment patented by Margaret Orr of London in 1889 may have been similar to the close fitting garments worn by women swimmers (see Figure 14).³⁵¹ Orr’s garment was intended to be worn over corsets, thus, to reduce bulk, fine yarns were used in certain areas.

In August of 1883, a foreign actress visiting Long Branch, New Jersey, reportedly wore the “most astonishing bathing attire.” Her dress “consisted...of a man’s rowing suit made of fine blue silk.” The woman’s figure rivaled that of Venus de Milo’s only there was “a little more of it.” The blue silk jersey and tights reached to her knees and were “dramatic” when wet. Young ladies were warned not to copy her if they hoped to rise in society. It was noted that many young women wanted to swim or, at least, pretended to want to learn. To be believable, they “discarded [the]sleeves” on their bathing suits.³⁵² During their exhibition in 1889, Annie Fern and her troupe wore leotards, “black garments that did not impede their movements” and revealed their “shapely figures.”³⁵³

In the mid 1880s men wore “heavy net suits of pure wool” with “jersey like shirt[s],” short trousers and belt.³⁵⁴ In all likelihood, these were high-gauge, knit suits. By

³⁵⁰New York Times, August 9, 1883, 8.

³⁵¹Margaret Orr, “Knitted Undergarment,” U.S. Patent 412,784 (October 15, 1889).

³⁵²New York Times, August 20, 1883, 1-2.

³⁵³New York Times, May 22, 1889, 8; May 25, 1889, 3; May 26, 1889, 2.

³⁵⁴Harper’s Bazar, July 26, 1884, 467; July 4, 1885, 427.

the late 1880s, nearly all men's suits were knits. Some were two-piece suits made of fine cashmere with tops that slipped over the head and trunks that adjusted by a draw-string (see Figures 15 and 16).³⁵⁵ Others were one-piece suits similar to long underwear (see Figure 17).³⁵⁶ John J. Pfister's one-piece knitted bathing suit of 1885 had legs and feet which were knitted in cylindrical tubes and then sewn together (see Figure 18).³⁵⁷ It was recommended that a long, loosely belted blouse of silk or light-weight alpaca be worn in public over tights or other close fitting knit garments.³⁵⁸

For public swimming matches in the 1880s, girls and women wore dark suits or knickerbockers and blouses with short sleeves and low neckline. "The cloth used was very light, made tight fitting, like jerseys, and without skirts."³⁵⁹ In 1887, The Delineator noted that women's dress usually deterred exercise. "What woman can accomplish in the way of exercise is shown in the circus, where they are constantly doing remarkable feats."³⁶⁰ Competitive women swimmers probably agreed and obligingly wore some form of tights. While the competitors welcomed the opportunity to swim unencumbered, we

³⁵⁵The Delineator, August 1887, 106.

³⁵⁶Bloomindale's Illustrated 1886 Catalogue: Fashions, Dry Goods and Houseware (New York: Bloomindale Brothers, Dover 1988), 22.

³⁵⁷J. J. Pfister, "Bathing Suit". U.S. Patent 318,133 (May 19, 1885).

³⁵⁸Harper's Bazar July 21, 1883, 51; New York Times, July 7, 1895, 21.

³⁵⁹New York Times, August 12, 1884, 1.

³⁶⁰The Delineator, August 1887, 190-191.

can surmise from the following report that not everyone was completely comfortable with the body revealing garments.

In August of 1893, Genevieve Mott, the 19-year-old daughter of Dr. Mott, wore a skirt over her black bathing suit during a match. The judge gave her and her competitors permission to swim without skirts. Miss Mott released her skirt and, “for the briefest moment [was] clad only in tights.” Carefully scrutinized when leaving the water, she was given a skirt to wear over her wet bathing suit.³⁶¹

Women at the public baths in the upper class section of New York in 1895 wore a simple bathing suit of light cotton or cotton and wool mixture. It was made “all in one piece, no sleeves, the upper part, which is half low in the neck, fastened at the shoulder, the lower part barely reaching the knees. There are no stockings and no skirt.” The regulation suits offered freedom of movement.³⁶²

In April 1899 a swimming school owner recommended short knickerbockers and blouses for swimming.³⁶³ There was no reason to wear skirts or stockings; and corsets made it impossible to execute “swim motions.” For swimming in public, she

³⁶¹New York Times August 6, 1893, 3.

³⁶²New York Times, June 11, 1895, 8.

³⁶³Cole, Encyclopedia of Dry Goods, 290. In 1900 knickerbockers were defined as loosely fitting knee-breeches resembling those worn by the Dutch in the 17th century. Sometimes the term referred to a general look which included breeches and long stockings.

recommended that a one-piece blouse and skirt of alpaca be worn over tights.³⁶⁴

By the early 1880s, knits were used more frequently for ordinary bathing costumes, too. An advertisement in the New York Times in 1881, noted knitted bathing suits for men and women at Daniell & Son, Broadway and 88th Street, New York. The ad did not contain illustrations but advertised “ladies’ complete knit bathing suits” for \$1.25.³⁶⁵ In the 1890s, jersey wool bathing suits for full-figured women were seen in women’s periodicals. The waist and full skirt were in one-piece; the drawers were close fitting tights (see Figure 19).³⁶⁶ Reportedly, women preferred the elasticity and lighter weight of the garments.

The newspaper and periodical writers in the 1880s often confused woven and knit fabrics. The newly touted “woven honey comb cotton suits,” may have been knits since they were “woven into shape just as under garments.”³⁶⁷ Other new styles were “woven in webbing like the Jersey cloths, though of much looser texture.” Most likely these garments in stripes or solid colors were knits containing cotton, wool, or mixtures of both.³⁶⁸

³⁶⁴New York Times, April 23, 1899, 20.

³⁶⁵New York Times, June 26, 1881, 12.

³⁶⁶Harper’s Bazar, July 4, 1885, 427; June 7, 1890, 454.

³⁶⁷Harper’s Bazar, July 17, 1880, 451.

³⁶⁸Harper’s Bazar, July 21, 1883, 451.

Not all functional swim suits were knits. Figures 20 to 23 illustrate some functional styles that were made of woven fabrics. They, too, offered great mobility while swimming. Made of seersucker, waffle weave, or other textured cottons, they had short sleeves or were sleeveless.³⁶⁹ The new styles were not confining but “loose in the way preferred by swimmers.”³⁷⁰ Jannette Bullis’ one-piece bathing suit of 1907 was similar to the romper-style Radcliffe swimming suit that I examined at the Arthur Schlesinger Library (see Figure 24 and Appendix A).³⁷¹ However, the Radcliffe suit was shorter than the Bullis garment and did not have a band at the leg; it also was worn over short bloomers.

When Annette Kellerman set out to swim the English channel, she was required to wear a swim suit. However, men scheduled to start from a different location, greased themselves with porpoise oil and wore no clothes. She wore a small garment, but it chafed her and caused her under-arms to be raw and painful after 6 ¾ hours of swimming.³⁷² Kellerman, an early adopter of functional swimwear for use in public, was arrested in Boston in 1907 for indecent exposure while wearing a one-piece swim suit.³⁷³

³⁶⁹Harper’s Bazar, July 6, 1889, 491.

³⁷⁰Harper’s Bazar July 21, 1883, 451.

³⁷¹Jannette Bullis, “Bathing Suit,” U.S. Patent 873,713 (December 17, 1907).

³⁷²Kellerman, “How I Swam Into Fame and Fortune,” 33-7; Kellerman, How to Swim, 24-25.

³⁷³Crow, The Edwardian Woman, 118-119; Woolum, Outstanding Women Athletics, 25.

Her legal case led to the relaxation of laws regarding women's apparel at public beaches. By 1911, Rose Pinoff, like other women in the United States, was free to wear knit functional swimwear at the beaches (see Figure 25).³⁷⁴

As public interest in women's swim events grew, comments on swimwear ceased. For the most part, the "shocking" costumes became acceptable uniforms of the sport. The A.G. Spalding catalog of 1904 (Figure 26) offered many examples of functional swimwear. While some are identified by gender, some are not. This may have been a deliberate omission. Since men had encouraged their female relatives to swim since the mid 19th century, it is quite possible they also encouraged them to wear garments that would improve their performance. By 1915, many women in the United States wore functional swimwear at the public beaches. It had become fashionable to do so (see Figures 27 and 28). As more women swam and competed in swimming matches, they may have adopted styles of swimwear that were worn by male competitors.

Two major categories of women swimmers were early adopters of functional swim garments: those who gave exhibitions or competed in public; and those who swam at the single sex bathhouses. Those who performed in public most often wore a form of tights like those worn by circus and theatrical performers. Those who swam at the single sex bathhouses wore tights or light-weight, simple one-piece garments that allowed for free movement of the arms and legs. Neither wore skirts while actively participating.

³⁷⁴New York Times, July 23, 1911, section 5, 14.

Garments worn for swimming from the 1870s to 1890 became briefer, lighter, and easier to put on and take off. The public baths, where strict time limits were in effect, may have encouraged this stylistic change.

CHAPTER 14

CONCLUSION, SUMMARY, AND RECOMMENDATIONS

In the previous chapters I traced the origin and development of women's functional swimwear using a variety of data sources. I was particularly interested in examining factors that contributed to its initial and later, general adoption. My goal was to gain a better understanding of how exogenous or external forces affect the movement of a style through the fashion process. Although I reviewed data for the period between 1850 and 1930, my study focused on approximately 1860 to 1920, the period which spanned the first through fourth stages of the fashion process: the origin, invention, or introduction of women's functional swimwear up to its widespread adoption by the majority of women in the United States.

My initial findings supported the thesis that bathing costumes followed the dominant outerwear silhouette of the era.³⁷⁵ Around 1915, the most popular style of women's bathing attire was the "tank suit," a simple garment that paralleled the streamlined lines or silhouette of the outerwear garments of the day. While the visual data indicated that men and children had adopted a similar functional style several decades before women, data collected from print media indicated some women had also adopted similar swimwear at the same time but for more specific occasions.

In addition to locating the early adopters of functional swimwear, I examined the conditions under which they wore functional swimwear and the reasons other women

³⁷⁵ Kidwell, Women's Bathing Costume, 16.

also adopted the style. In doing so, I gained insight into some of the inconsistencies that faced American women as they adjusted to the changes brought by industrialization. My findings indicated that women were swimming much earlier than what is generally believed to be the case; that specific functional costumes were sanctioned for women engaged in exhibitions and competition; that public, sex-segregated bathhouses required the use of functional garments in the late 1870s; and that male swimmers encouraged and taught swimming to their female relatives.

To illustrate the rationale of my study, I developed a conceptual model which demonstrates my perception of how changes brought by industrialization influenced the development of functional swimwear (see Figure 29). The major, interrelated changes that I focused on, as seen in the far left box of my model, included urban population growth, leisure, transportation, medicine, education, technology, employment, and the growing status of the United States. It is my belief that each factor within the first box had an impact upon the other factors within it. The next box to the right suggests some of the manifestations, obvious problems, or implications associated with these changes. The third box states some of the ramifications, remedies, or solutions offered to deal with these problems. The small boxes on the far right express my interpretation of the culminating influence on dress, specifically functional swimwear. I do not suggest that these changes brought by industrialization are the only ones that occurred, nor do I contend that these were the only factors that affected dress. I merely suggest that these may have been some of the most significant influences.

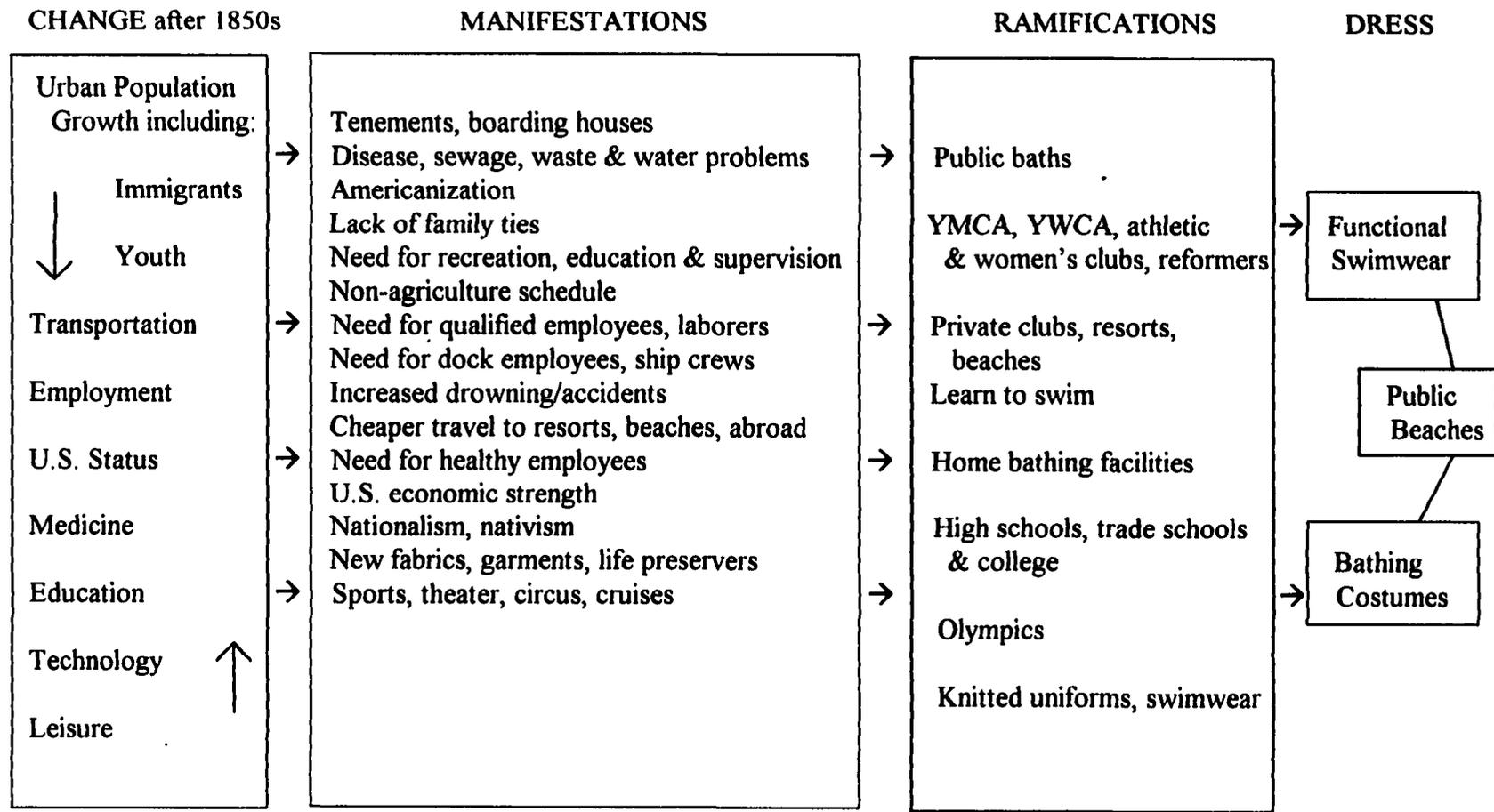


Figure 29. Impact of Industrialization on Stylistic Change Model

At the start of my research, I investigated those factors that logically might have been related to women's decision to adopt functional swimwear: urban lifestyle, education and status of women, leisure activities, swimming facilities, renowned female swimmers, and the Olympics. Other topics surfaced as the research ensued: death by drowning, water travel, life preservers, and the public baths. Not all factors were examined with the same intensity or depth; many were covered briefly only to show how they may have related to women's clothing decisions. For instance, 19th century women's status, and more specifically, women's education is an enormous area of inquiry. However, I selected data that indicated that significant changes had occurred for women.

Industrialization brought great advantages and disadvantages. Among the advantages were the democratization of goods and services, greater literacy and education, increased leisure activities, advances in medicine and technology, greater control over nature, new forms of entertainment, vast opportunities for personal and material gain as well as world leadership for the United States. It also brought disadvantages in the form of high density or inadequate living quarters, filth and disease, long arduous work days, abusive employers, loss of close ties to family and friends, confusion of roles, and other inconsistencies. Nevertheless, masses of people from rural areas or abroad came to the cities for employment and the possibility of a better life. Many organizations sought to help the newcomers through their transition. Their motivations were varied and complex. A true desire to help, nativism, fear, and economic gain were among the motives.

Tracing the development of women's functional swimwear underscored many of the dilemmas and inconsistencies brought by industrialization. The ideal social standards or perspective of the era endorsed the support of women and children by men. However, in reality, many women and children supported themselves. Married women were vulnerable in the event their spouse was absent or died. This was particularly true when they were far from family. Goals of education and self-sufficiency were prudent.

As young women migrated to the cities for employment and education, they had greater personal freedom to mix and mingle with those of the opposite sex and differing classes. They enjoyed new forms of entertainment and leisure such as the theater, circus, sports, pleasure cruises, and other activities. While some women chose non-traditional occupations, most worked in factories or stores and lived in boarding houses or rented rooms. Like other urban residents of the era, they had limited access to water for cleansing purposes. By the 1870s, public baths, modeled after those of Europe, were established primarily to curb disease and help assimilate immigrants or other newcomers. Young working women by the thousands took advantage of these facilities.

Many facets of 19th century life depended on large bodies of water. Those who worked or enjoyed activities in, on, or around water were vulnerable to drowning regardless of where they lived. Women and children were in particular danger if they assumed others would rescue them in emergencies. While males sometimes took a romantic view toward rescuing "ladies in distress," in actual situations they often were unable to help others.

Men and women of the 19th century read the numerous accounts of death by drowning in the newspapers. The reports of massive loss of lives that occurred on ocean or pleasure steamers probably led them to heed the advice of the editorials which encouraged all to learn to swim. No one person could protect their loved ones at all times; but, by encouraging self-sufficiency, one could improve the chance of survival. This was borne out by the accounts of survivors of ship collisions.

In a disaster, even reasonably capable ship crews were highly taxed. But, as suggested by the survivors, the crew often was ill-prepared for emergencies. Few knew how to swim and thus feared drowning. Since life preservers were kept in the cabins, unless a woman wore or carried one on her person, she might not have one during an emergency. Returning to a cabin would have been dangerous, especially when carrying a child or dressed in restrictive clothing. Furthermore, life preservers and boats were not always functional or available in sufficient quantity for all passengers and crew. Thus, 19th century inventors attempted to devise life preservers that could be worn at all times, were easy to apply, or required little attention once on the body.

The newspaper accounts revealed that anyone, anywhere could be a victim or could lose a loved one. I believe women came to understand the value of knowing how to swim and how to conduct themselves in an emergency. Therefore, although the public bathhouses of the 1870s were established primarily for the poor, people of all classes used them to learn to swim. The baths had large swimming pools which were ideal for the teaching of swimming. Young working women from the neighborhoods as well as “ladies” from the upscale sections of New York regularly came to the baths on the

special days set aside. In the all-female arena, they unselfconsciously learned to swim from competent instructors who were convinced, and convinced others, that women of all ages and physical ability could and should learn to swim. Within days, they proved their point.

The instructors insisted that proper clothing be worn. A simple, non-skirted regulation swim suit offered freedom of motion. Most men and boys learned to swim wearing little or no clothing, a practice they were reluctant to give up. Women who swam in public were encumbered by heavy clothing and restrictive under-garments. With less confining garments at the bathhouses, they quickly learned to swim. Learning to swim offered a degree of insurance against needless death.

The bathhouse owners and expert male swimmers from the late 1860s forward encouraged their female relatives to swim. Many outstanding women swimmers were trained or encouraged to swim at a very early age; some were the daughters of medical doctors and other professionals. By 1900 thousands of women had learned to swim at public baths wearing functional swimming garments. Once women enjoyed the freedom of these garments, it was unlikely they would revert to restrictive garments. Although public baths were no longer necessary for cleanliness by 1915, women continued to wear functional swimwear in public.

Outstanding women swimmers became supervisors at the neighborhood baths or lifeguards at the beaches. Many maintained their amateur status by training with the United States Volunteer Life Saving Corps. Early adopters of functional swimwear, some waited years to participate in the Olympic games. When this occurred in 1920, it

was long after the majority of American women had adopted functional swimwear as fashionable wear.

When, as early as we can tell, women first began swimming, their garments were simplified versions of outerwear and, more specifically, like the bloomer costumes of the 1850s. As more women began to swim, the garments became briefer, lighter, and more practical. More streamlined versions of swimwear emerged from Paris in the late 1860s. Outstanding women competitors or performers such as Agnes Beckwith, Annette Kellerman, and others wore simple tights like those worn in the circus and theater. However, many more non-performing women were introduced to simple, one-piece swimming garments at the public baths which were reserved solely for women on specific days of the week.

Although details are limited, we know that women were not allowed to wear skirts in the bathhouse pools in 1877. To facilitate mobility, they wore simple garments with openings for the arms, legs and head to pass through. The garments were available for a small rental fee or, to save money, the working women brought their own. Since knit technology was well advanced by 1870, the garments may have been knitted. By the 1880s many girls and women wore knitted, two piece blouses and knickerbockers for swimming matches. Cheap and mass-produced, knitted garments were plentiful and frequently used in swimwear; they were functional and convenient.

However, not all functional swimwear was knitted. Once the medical community offered better explanations for the spread of disease, woven cotton was increasingly used for active swimwear. The women's periodicals of the 1880s and 1890s featured many

examples of these. Nevertheless, women athletes preferred the knit suits similar to those worn by male swimmers. Undoubtedly, those women taught and trained by male relatives were also encouraged to wear the knits to improve their performance. When swimming was sanctioned by the upper classes, they, too, chose the streamlined, convenient, practical garments.

Swimming was a simple sport which did not require elaborate equipment or boats. Since public baths were primarily associated with the poor, the sport and its functional suits were largely ignored by the elite until it was socially acceptable for women to be athletic and competitive. This may explain why few reports on collegiate and private club competitions for women were noted in the media until the 1890s. While many factors influenced the adoption of functional swimwear, I believe the public baths and women's desire for self-protection were the most significant. The urban public baths offered instruction to all classes of citizens; thus, thousands, if not millions of women, learned to swim there. The adoption of functional swimwear by the lower class patrons of the baths was an example of fashion rising or, in fashion theory terminology, the "trickle-up" or "status float" phenomenon. The functional swimsuit of the bathhouses was legitimized for the average American woman once the style became associated with famous athletes, actresses, and wealthier members of society.

Although my data suggested that the collegiate and YWCA swimming programs for women developed later than the programs at the public baths, this subject needs greater scrutiny. Since I sought specific swimming related information from only the New York Times and the Chicago Tribune, it would be prudent to peruse a west coast

newspaper as well as one from another inland city. Additionally, since Boston had the earliest and most effective public bath program and, consequently, many outstanding women swimmers, I believe more information from Boston would enhance my findings. Bathing suits available at the beaches and bathhouses in the 1860s and 1870s represented one of the earliest examples of rental clothing. They also were early examples of mass-produced garments. Both of these topics are avenues for additional research.

Since it is difficult to find extant examples of garments worn or consumed by ordinary people, the task of collecting data is complex, challenging, and interesting for the costume historian. In researching my topic, I utilized several data sources. Because the women's periodicals presented the ideal, often the unusual or non-fashionable garments were ignored. By using catalogs, postcard collection, family photographs, and newspaper accounts, more extensive information related to bathing garments emerged. I believe more data may be available in correspondence, diaries, and from oral histories.

I suggest the origin of other dress be investigated for examples of the trickle-up fashion process. By doing so, designers, retailers, and marketing professionals may gain additional insight into how special conditions lead to the adoption of new forms of clothing. It is quite possible that functionality has been of greater significance than we have assumed. Costume research tends to be visually oriented; however, we frequently lack sufficient, representative visual data. Therefore, we may have to increase our use of descriptive data to strengthen our knowledge of the origin and development of various garments. This is of particular significance for clothing worn by the lower classes since limited visual data belonging to them has survived.

APPENDIX A

EXTANT BATHING/SWIMMING GARMENTS EXAMINED

Data #/Date	ID #	Circa	Location*	Description
1 9/--/93		1900	ISU	Bathing costume, one-piece w/skirt, woven/wool/cotton
2 6/7/94	N/A	1902	ASL	Swimsuit, Radcliffe alumna, one-piece romper, cotton denim
3 1/6/95	677.79.1	1916	DHS	Bathing/gym suit, one piece/bloomer, woven/linen
4 1/20/95	1994.20F	1908	CHS	Swimsuit (German), one piece, cotton twill weave
5 1/20/95	1951.194ab	1910	CHS	Bathing costume, one piece w/skirt, woven wool
6 1/20/95	1954.122	1915	CHS	Swim suit, striped, wool jersey
7 1/20/95	1986.761.40a-c	1914-18	CHS	Bathing costume, woven silk, silk rib knit/silk woven undergarment
8 1/20/95	1983.654.3	1930s	CHS	Dressmaker suit, wool/rayon, striped rib knit, built in bra of rayon knit
9 2/17/95	1967.115	1930s	CHS	Dressmaker, Catalina swimsuit, faille, tricot underpants
10 2/17/95	1974.219ab	1930s	CHS	Dressmaker, Saks 5 th Avenue, woven cotton, tricot lining and underpants
11 2/17/95	1977.97.30	1930s	CHS	Dressmaker suit, dotted silk print, tricot lining and undepants
12 2/17/95	CC1973.68	1930-36	CHS	Swimsuit, wool knit, no lining, double fabric crotch
13 2/17/95	1961.217	1930	CHS	Swimsuit, Formrite, wool knit, no lining except in bust area, low cut f/b
14 2/17/95	1945.118(2116-7H)	1912	CHS	Bathing costume, one piece, alpaca, bloomers missing, sailor collar
15 2/17/95	1976.237.59	N/D	CHS	Swimsuit, wool jacquard knit, no lining, very low back
16 3/31/95	1973.87	1915-25	CHS	Swimsuit, Athletic Goods Co., wool rib knit, very brief legs, no lining
17 3/31/95	1975.177.11	1917	CHS	Bathing costume, woven wool dress w/ bloomers, short sleeves
18 3/31/95	1940.109a-f	1914	CHS	Undergarment of bathing costume, block wool knit with rib cuff
19 3/31/95	1961.701a-d	1915	CHS	Bathing costume, silk taffeta, sailor collar, short capped sleeves
20 3/31/95	CC1971.204	1915	CHS	Bathing costume, one piece w/skirt sewn to body, woven wool
21 3/31/95	CC1973.85	1915-25	CHS	Swimsuit, Lorenz, wool knit, one-piece, attach/underpants, low neck/arms
22 3/31/95	1977.76	1925	CHS	Swimsuit, rib knit, one-piece, low cut arms/neck, attach/underpants

*ISU=Iowa State University; ASL= Arthur Schlesinger Library; DHS = DuPage Historical Society; CHS = Chicago Historical Society

APPENDIX B

SELECTED U.S. PATENTS RELATED TO KNITS AND SWIMWEAR

<u>Date</u>	<u>Number</u>	<u>Item</u>	<u>Inventor</u>
1864	41218	Improvement in knitted fabric, fulled and finished	Harwood
1869	87107	Improved bathing dress, unisex fitted suit	Morse
1871	120126	Improvement in knit fabric, knit loose & stiffened	Thacker
1872	131386	Improvement in knit fabrics, fancy stitches	Bickford*
1872	131387	Improvement in knit fabric, fancy stitches	Bickford*
1872	131388	Improvement in knitting stockings, joining selvages	Bickford*
1874	151715	Improvement in knit fabrics, use of attachment	Platt
1875	8745	Design for knitted skirts, fancy borders at hem	Wallis
1881	240569	Under-shirt/vest knitted w/ combined stitches	Appleton
1881	244933	Knit fabric for mittens, circular knit, vary gauge	Robinson
1882	259877	Under-garment for infants, separate knitted legs	Lightcapp*
1882	259020	Bathing garment, yoke with/without skirt	Hutton
1884	294637	Knitted jacket, areas of sleeves, body knitted together	Kreisel
1885	321250	Knitted garment, connecting back/front of cardigan	Reichman
1885	310171	Bathing garment, one body/skirt, separate drawers	Beers*
1887	356142	Knit garment, elastic body w/ firm shoulder/yoke	Lewis
1887	357068	Undershirt/or vest, shaped by varying rib stitches	Dalby
1887	370781	Under-garment, improved children's	Haight
1888	378053	Seamless under-garment, improvement	Hopkins
1889	404229	Knitted Shirt, body in one continuous piece, shaped	Scott
1889	405903	Drawers, woven fabric w/ knitted legs	North
1889	410600	Method of making knitted drawers, fabric tube	Mills
1889	411113	Straight knitting machine for splicing selvages	Templeman
1889	412784	Knitted undergarment	Orr*
1890	422640	Shirt of knit, ribbed body, shaped sleeves	Scott
1890	422641	Drawers of Knit with shaped legs	Scott
1891	455700	Stocking, etc.; shape knit garments to reduce bulk	Bourne*
1895	550171	Bathing form, rubber bra-like, protect/shield breasts	Hatch*
1898	599408	Bathing shirt/trunks, made in one, tied at waist	Uppercu
1898	601556	Bathing suit, reduce body exposure, coated fabric	Davis
1898	601781	Bathing suit w/ built in corset and attached stockings	Shepard*
1899	622010	Improvement in bathing/athletic garment w/ corset	Lowe
1902	729005	Knitting machine for knitting heels/toes of stockings	Steber
1906	839699	Bathing suit, knit two piece male, prevents separation	Anderson
1907	873713	Bathing suit, romper style functional suit	Bullis*

*Women inventor/designers. Others may be women since initials were often used.

<u>Date</u>	<u>Number</u>	<u>Item</u>	<u>Inventor</u>
1908	920688	Bathing/athletic suit, princess style/attached bloomers	Taylor*
1909	928221	Knitted fabric, alternate large/ small stitch	Scott
1909	928222	Knitted rib fabric, alternate large/small stitch	Scott
1909	930303	Swimming suit, male, trunks/top, modesty	Maslen
1909	936021	Bathing suit, lengthen/cover legs while out of water	Netz*
1910	959441	Swimming shirt, male swim/athletic, non-separating	Anderson
1910	977455	Bust and abdominal supporter, under bathing suits	Lazell*
1911	989193	Athletic/bathing costume, ladies, one piece	Routery
1920	56626	Design for bathing rompers	Rubin
1921	58411	Design for bathing suit, one shoulder design	Tyrrell
1931	84929	Design for bathing suit	Fogel*
1931	86113	Design for athletic trousers	Dwyer
1931	86114	Design for athletic trousers	Dwyer
1931	87376	Design for swimming suit	Whiting
1932	87375	Design for swimming suit, combined shoulder straps	Whiting
1932	87725	Design for trunks of a bathing suit, knit, belted	Michelson

APPENDIX C

SELECTED U.S. PATENTS FOR SWIMMING DEVICES AND LIFE PRESERVERS

<u>Date</u>	<u>Number</u>	<u>Item</u>	<u>Inventor</u>
1840	1619	Improvement in life preservers, pantaloons	Porter
1857	18691	Improvement in method of floating horses, water wings	Heintzeman
1863	38505	Life preserver, inflated ring worn on head to learn to swim	Scholfield
1863	39311	Life preserver, floats take on water to learn to swim	Scholfield
1869	91800	Life preserver, rubber fins aid in swimming	Barnett
1870	105730	Improved life preserving skirt, hoops worn under clothes	Saul*
1874	149721	Improvement in life preservers, adjustable ring with floats	Clark
1883	286660	Bathing garment/life preserver, quilted	Weil
1884	309032	Life preserver, inflated pockets on ring	Ledochowski
1885	313845	Bathing garment with pocket for life preserver	Ashner
1901	673672	Swimming bags, water wings/life preserver	Ayvad
1904	760948	Valve for swimming bags/water wings	Ayvad

*Women inventor/designers. Others may be women since initials were often used.

APPENDIX D

ESTIMATED UNITED STATES POPULATION COMPOSITION, 1850-1920

Year	Total Population	Rural	Percent	Urban	Percent	Foreign Born	Percent
1850	23,086,000	19,648,000	85.1	3,544,000	14.9	2,241,000	9.7
1860	31,513,000	25,227,000	80.0	6,217,000	20.0	4,097,000	13.0
1870	39,905,000	28,656,000	71.8	9,902,000	28.2	5,494,000	13.8
1880	50,262,000	36,026,000	71.7	4,130,000	28.3	6,560,000	13.1
1890	63,056,000	40,841,000	64.8	22,106,000	35.2	9,122,000	14.5
1900	76,094,000	45,835,000	60.2	30,160,000	39.8	10,214,000	13.4
1910	92,407,000	49,973,000	54.1	41,999,000	45.9	13,346,000	14.4
1920	106,466,000	51,552,000	48.4	54,158,000	51.6	13,713,000	12.8

Source:

U.S. Bureau of the Census. Twelfth Census of the United States, 1900: Statistical Atlas. Washington, 1903, 37; U.S. Bureau of the Census. Historical Statistics of the United States, Colonial Times to 1957. Washington, 1960, 9.

GLOSSARY³⁷⁶

Alpaca. A mixed twill fabric with a cotton warp and a filling of fine, glossy hair fibers from the alpaca, a mountain dwelling animal of South America.

Brilliantine. A mixed, wiry, lightweight open weave fabric made with a cotton warp and wool or mohair filling. Recommended for its non-clinging property.

Cashmere. A lightweight, soft, twill weave fabric made from a fine grade of Australian wool. Plied yarns of cotton or wool in the warp gave added strength and durability.

Cheviot. A dense, twill weave variation of flannel with a long, sheared nap.

Cravenette. A heavy-weight, tightly woven, water-resistant, twill weave fabric made of wool. Used for raincoats and uniforms such as those worn by the Salvation Army.

Denim. A sturdy, heavy, twill weave fabric made of cotton in solids, stripes and checks. Used for work clothes and upholstery.

Drill. A sturdy, twill weave fabric made of cotton or linen. Used for linings, pockets, bedding, boat sails, or wherever an inexpensive, durable material was required.

Faille. A silk, plain weave fabric with pronounced ribs in the filling direction.

Farmer's satin. A mixed fabric of fine-cotton warp and worsted filling. High luster finish acquired by passing between hot rollers.

Flannel. A group of fabrics of various weaves, quality, texture, fiber content, and finishes. Usually with napped or fuzzy surface.

French merino or French flannel. A soft, napped, finely woven, twill fabric. Originally made from the long, luxurious fibers of selectively bred Spanish sheep.

Full-fashioned knit. A technique of increasing and decreasing knit stitches to shape a garment as it was being knitted.

Gloria. A lustrous, resilient, warp-faced twill weave fabric made of silk warp and fine, high grade Australian worsted wool filling. Water-resistant, the fabric did not cut or crack with creasing, thus was used to cover umbrellas.

³⁷⁶Information for this glossary was derived from George S. Cole, Cole's Encyclopedia of Dry Goods (New York: The Economist Press, 1900); M. David Potter and Bernard P. Corbman, Fiber to Fabric. 2nd edition (New York: McGraw Hill, 1954).

Grosgrain. A plain weave silk fabric with heavy filling yarns of cotton, that created ribs which were more pronounced than those of faille. Used for ribbons and trim.

Honeycomb. A textured, absorbent, cotton fabric with small designs woven with dobby attachment.

Huck. A textured, absorbent, cotton fabric with small designs woven with dobby attachment.

Jersey. A close-fitting upper garment made of knitted worsted or silk material. Used for athletic purposes. Made without front opening but elastic enough to pass over the head.

Jersey cloth. A stockinet or single knit fabric of cotton, wool, silk, and mixtures.

Mixed fabrics. The use of a yarn of one fiber content in the warp and the use of a yarn of another fiber content in the filling. Cotton warp was frequently used with expensive wool or hair fiber in the filling. Silk was also used for warp. Common examples of mixed fabrics included mohair and brilliantine.

Mohair. A lightweight, wiry, lustrous, plain or twill weave fabric made with a cotton warp and a filling of angora goat hair.

Moire. A finely ribbed silk fabric with a watermark appearance created by hot engraved rollers.

Moreen. A tightly woven, mixed fabric of cotton warp and wool or mohair filling. Sometimes made with silk warp. Watermark appearance created by hot engraved rollers.

Peau de soie. A heavy silk, satin weave fabric with a high luster.

Pongee. A fabric of rough, uneven texture made from wild silk.

Poplin. A plain weave, cotton fabric with crosswise ribs.

Rep. A plain weave, silk fabric with pronounced ribs.

Ribbed knits. An elastic fabric produced by alternating knit and purl stitches. Made by hand or on double-bed knitting machines.

Sateen. A smooth, lustrous cotton, satin weave fabric with long floats on surface.

Satin. A smooth, lustrous silk, satin weave fabric with long floats on surface.

Seersucker. A plain weave, cotton fabric. Texture created by slack tension of selected warp yarns.

Serge. A category of worsteds usually made of wool but also of silk or cotton. Its fine, tight twill structure made it very durable and smooth.

Stockinet. A single knit, plain fabric made flat or tubular of wool, cotton, silk, or mixtures.

Surah. A strong, twill weave, silk fabric.

Taffeta. A highly lustrous, crisp, plain weave, silk fabric.

Tickling. A sturdy cotton, tightly woven, twill fabric used for the outside cover of mattresses and pillows. White and navy yarns selectively placed in the warp resulted in a characteristic striped appearance.

Turkish toweling. An absorbent cotton, pile fabric with uncut loops on both sides.

Waffle weave. An absorbent, woven, textured cotton fabric with raised and sunken squares created with dobby attachment.

Worsted. A group of firmly woven twill fabrics made of combed, highly twisted wool yarns.

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