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I am submitting herewith a thesis written by Mary Ann Mabry entitled "The Relationship Between Fluctuations in Hemlines and Stock Market Averages From 1921 to 1971." I recommend that it be accepted for nine quarter hours of credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Textiles and Clothing.

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THE RELATIONSHIP BETWEEN FLUCTUATIONS IN HEDLINES
AND STOCK MARKET AVERAGES FROM 1921 TO 1971

A Thesis
Presented to
the Graduate Council of
The University of Tennessee

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
Mary Ann Mabry
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ABSTRACT

The purpose of this research was to study selected economic factors underlying the fluctuations of hemlines and stock market averages from 1921 to 1971, and to determine any effect of these fluctuations on the upper and middle classes of society who wore these hem lengths. Hypotheses were:

1. There will be a relationship between fluctuations in hemlines and stock market averages from 1921 to 1971 which will be affected by prevalent economic factors operant at the time.

2. A study of hemline fluctuations of both the upper and middle classes from 1921 to 1971 will reveal a time lag between the two classes as affected by selected economic factors, and will indicate the reaction of the middle class to be slower to accept fashion hemline innovation than the upper class.

Data were collected by several means. A measuring technique was developed for use with illustrations in four fashion periodicals, Vogue, Harper's Bazaar, Good Housekeeping, and Ladies' Home Journal. These four fashion periodicals were assumed to have been read by women of the upper and middle classes and to have contained illustrations of the typical dress worn during the time period studied. Data on stock market fluctuations were secured for each of the 50 years under examination from the Dow Jones Stock Averages Chart 1921-1970.

Selected economic events occurring during the 50 year period from 1921 to 1971, including depressions, recessions, inflationary

periods, and wars, were reviewed. Information was obtained from current economic histories of the United States, up-to-date accounts of the economic affairs of the nation in the twentieth century, and analyses of American economic development.

Fluctuations of both hemlines and stock market averages were compared graphically to determine any relationship between the two and to discover any time lag between the two social classes studied. Coefficients of correlation (r) were employed in the analysis of data. Z differences were also determined and tested for statistical significance.

Findings indicated a positive relationship between selected economic factors, as measured by stock market fluctuations, and hemline fluctuations for the 50 years of the study. A time lag between the upper and middle classes concerning acceptance of hemline innovation was revealed for the last two decades of the period under scrutiny.

In conclusion, the findings substantiated hypothesis number one as stated but only partially substantiated hypothesis number two.

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CHAPTER I

INTRODUCTION

The underlying causes of change in fashion are mirrors of the developments of civilization. They are found in every aspect of life, including history, economics, sociology, art, and architecture to name but a few. Twentieth century American fashions in dress have been influenced by advanced technological developments, by the rising popularity of sports for women, by the movies and their stars, by the two world wars, and by the changing lifestyle of people in the decade of the sixties towards a more casual "live and let live" existence. The social position and the role of women in the world has changed in the twentieth century, giving them a new freedom to live as liberated individuals if they so choose. Throughout the decades of the twentieth century, fashion has been a reflector of the times.

Fashion determines, to a large extent, what women will wear each year. It is the effort of fashion leaders to escape uniformity and to acquire desirable individuality by moderate departures from currently approved modes.¹ The controlling factor of changes in women's dress is that all women desire to wear each year dress which is sufficiently different from that of the last year, so as to be unmistakably recognizable as being of the latest mode. Yet, at the same time, these women wish to wear dress neither identical with

¹Agnes Brooks Young, Recurring Cycles of Fashion (New York: Harper and Brothers Publishers, 1937), p. 4.

that of other women, nor so different from them as to be undesirably conspicuous.² The successful annual change which outmodes the styles of the year before must be a slight but significant alteration in the central type of the generally accepted costume.

Each year minor modifications are made for new fashions in hopes they will appeal to consumers. These changes seem to move cyclically with one alteration being emphasized for a certain length of time, to be followed by another point of emphasis in the next time period. In her book Recurring Cycles of Fashion, Young noted this movement of fashion in cycles and concluded that women's dress styles had moved through a series of recurring cycles.³ Each of these three basic cycles lasted for approximately one-third of a century, and during each, the yearly fashion silhouette changes were merely modifications or adaptations of the central fashion type. These cycles were three--back-fullness, tubular, and bell-shaped. The first, back-fullness, lasted from 1760 to 1795, followed by the tubular cycle which extended from 1796 to 1829. The bell-shaped cycle began in 1830 and continued until 1868, when the three-cycle fashion sequence began anew.

Another explanation offered to explain the change in fashion trends is Laver's "erogenous-zone" theory. In this theory, it was believed that the female garb of any period reflected whatever part

²Ibid.

³Ibid., p. 3; 21.

of the body was attracting the most sexual interest. During the 1920's, interest was centered on the legs, in the 1930's on the back, in the 1940's on the waist, in the 1950's on the bust, and in the 1960's on the legs.⁴

Various theories have been proposed to explain how fashion moves among social classes. One explanation is the "trickle down" theory in which fashion innovation begins with the upper class and "trickles down" to the broad masses.⁵ Another explanation offered is that fashion may move in a horizontal direction within each social class rather than in a vertical flow from the upper to lower levels.⁶

One of the slight but significant changes in fashion trends often noticed is the hemline. Hem lengths became an important facet of fashion during the sixties, just as they were the highlights of preceding decades, beginning with 1920. The fluctuation of hemlines has resulted in a cause-and-effect issue of past, present, and future styles for the twentieth century American woman.

Various theories have been offered as explanations for hemline fluctuations. One theory states that the level of hemlines coincides with "oscillations in the cultural barometer."⁷ Another suggests,

⁴James Laver, Modesty in Dress (Boston: Houghton Mifflin Co., 1969), p. 153.

⁵Mary Ellen Roach and Joanne Bubolz Eicher, Dress, Adornment, and the Social Order (New York: John Wiley and Sons, Inc., 1965), p. 338.

⁶Margaret P. Grindere, "Fashion Diffusion," Journal of Home Economics, Vol. 59, No. 3 (March, 1967), pp. 171-174.

⁷"The Battle of the Hemlines," Newsweek (March 16, 1970), 74.

"The middle-aged, who like long skirts, determine social standards in times of depression or recession. And young people, who like short skirts, determine standards in times of prosperity."⁸ With the introduction of the midi, a mid-calf length skirt, a theory suggested the idea that the longer length denoted a "decline in the youth cult," and was a "symbol of revulsion against the radical, Yippie type values as well as an endorsement of conservation and propriety."⁹ Sexual confusion, or the "uni-sex" movement could be yet another explanation for the fluctuating hemlines.¹⁰

The theory that hemlines rise and fall with the changes in the stock market is offered as a reason for the fluctuating nature of this facet of fashion and is one that has been researched to a certain degree within recent years. In 1967, a New York brokerage firm, Harris, Upham, and Company, Inc., completed a study of women's fashions worn since 1897. Their research indicated that hemlines and stock prices have tended to move together for the "past 70 years."¹¹ They prepared a graphical chart, "The Hemline Indicator," illustrating the correlation between stock prices and hemlines since 1897. This graph indicated that from the Victorian days of the street-sweeping

⁸Ibid.

⁹Richard Martin, "Heard on the Street," Wall Street Journal (February 27, 1970), 27.

¹⁰"The Battle of the Hemlines," op. cit., 74.

¹¹"As Wall Street Watches Hemlines," U.S. News and World Report, 62 (May 29, 1967), 94.

skirts of 1897 to the miniskirts and microskirts of the late 1960's, the highs and lows in the Dow Jones Averages of industrial stocks were accompanied by corresponding highs and lows in women's hemlines.

I. JUSTIFICATION

Previous studies such as the one just noted have assumed that the stock market did affect hemlines of dress worn by women in the twentieth century, but no valid basis for such an assumption has been established, and the charts and illustrations presented were neither clear nor easy to read. Nor has any research been done on the hemlines worn by the different social classes during the twentieth century. A study of the theory that hemlines follow the stock market would help to determine if the fluctuations in the stock market actually affect the rise and fall of hemlines in the United States or whether the fluctuations are just a concomitant occurrence in the fashion industry of America. A look at those hemlines worn by the upper and middle classes as defined by the readership of upper and middle class fashion magazines would reveal any relationship between the two classes and the stock market with regard to the economic factors which could influence both social and economic behavior, and could particularly denote any time lag between the two classes in the acceptance of fashion innovation.

Society as represented by the various classes is subject to continual change; its present form is the result of its past history and current events. In different ages, economic, social, political, and religious ideals condition society, each contributing some vital aspect to the culture of the time. The sequence of historical fashions

is a mirror of these interwoven cultural aspects.¹² One of these cultural aspects, general economic conditions, as reflected by stock market averages, affects the social behavior of all classes of Americans. (In this case social behavior will be reflected by a fashion extreme, the fluctuations in hemlines.) Both economic behavior and social behavior are interrelated because they are psychologically oriented to future expectations which cause these variables to fluctuate in either an upward or downward direction. These fluctuations take the form of long-term trends in their movements and thus can be graphed in a similar manner for purposes of study and comparison. To establish a basis upon which fashion innovation can be evaluated as having been influenced by stock market averages and other economic factors, the fashion changes and selected economic occurrences affecting society's upper and middle classes were studied during the time period from 1921 to 1971.

II. STATEMENT OF THE PROBLEM

The purpose was to study selected economic factors underlying the fluctuations of hemlines and stock market averages from 1921 to 1971, and to determine any effect of these fluctuations on the upper and middle classes of society who wore these hem lengths.

III. HYPOTHESES

1. There will be a relationship between fluctuations in hemlines

¹²Ingrid Brenninkmeyer, The Sociology of Fashion (Druck: Verlag P.G. Keller, 1963), p. 112.

and stock market averages from 1921 to 1971 which will be affected by prevalent economic factors operant at the time.

2. A study of hemline fluctuations of both the upper and middle classes from 1921 to 1971 will reveal a time lag between the two classes as affected by selected economic factors, and will indicate the reaction of the middle class to be slower to accept fashion hemline innovation than the upper class.

IV. ASSUMPTIONS

The hypotheses as stated were based on the following assumptions:

1. Hemlines have fluctuated during the last five decades of the twentieth century.

2. The American stock market has followed a pattern of movement in relation to the economic condition of the nation in the past fifty years.

3. Fluctuations of hemlines and the stock market occurred with some frequency during the time period studied.

4. The fluctuations in hemlines of both the upper and middle classes differed to a certain degree from 1921 to 1971.

5. The periodicals chosen as representative of the upper and middle classes were actually read by the women of those classes.

6. The hemlines pictured in the periodicals were typical of the costumes worn by the women.

7. A time lag occurs between fashion innovation and fashion acceptance.

V. LIMITATIONS

The year 1921 was chosen as the starting point because the Dow Jones Averages used in computing fluctuations in the stock market were not in existence until this time. The year 1970 was selected as the termination point of the study. After 1970, the study of hemlines is complicated by a lack of available data.

Since the dollar value of shares traded annually on the New York Stock Exchange amounted to more than five times that handled by all the other exchanges together, only data describing the movements of this exchange were used. The most accurate and voluminous data were available for the present and past events on the New York Stock Exchange.¹³

The averages of the monthly highs and lows of the Dow Jones Industrial Averages were used as an indication of stock market fluctuations. The market averages in common use correctly describe the general price movements of the stock market and are the most convenient means of measuring changes in market prices.¹⁴

Street dress worn by American women was used as a basis for the study. Clothing designed for active sports, evening dresses, and "dressy" afternoon clothes was excluded in analysis of hem lengths.

¹³Harvey A. Krow, Stock Market Behavior (New York: Random House, 1969), p. 21.

¹⁴Ibid., p. 22.

VI. DEFINITIONS OF TERMS

Dow Jones Industrial Averages. The average monthly selling prices of thirty well-known industrial stocks listed on the New York Stock Exchange.¹⁵

Fluctuation. Any movement of a hemline of an inch or more in an upward or downward direction.

Hemline. The point at which the bottom of a skirt strikes the legs of the wearer; synonymous with "skirt length", "hem length."

Maxiskirt. A longer skirt with hemline somewhere between knee and ankle, usually nearer to the ankle, as seen in Figure 1.¹⁶

Microskirt. A short skirt just covering the hips, reaching popularity in the '60's, as illustrated in Figure 1.¹⁷

Middle-Class. A class composed of a grouping of professionals, independent enterprisers, craftsmen, and artisans. Beneath this group in the power and economic hierarchy and larger in numbers were the slightly less prosperous entrepreneurs and professionals. Further below and numerically more dominant were semi-professionals, small and salaried businessmen, salesmen and clerks. Those women who read Good Housekeeping and Ladies' Home Journal were assumed to be middle-class.¹⁸

¹⁵George L. Leffler and Loring C. Farwell, The Stock Market (New York: The Ronald Press Co., 1963), p. 485.

¹⁶Ruth Turner Wilcox, The Dictionary of Costume (New York: Charles Scribner's Sons, 1969), p. 323.

¹⁷Ibid.

¹⁸Harold M. Hodges, Jr., Social Stratification (Cambridge: Schenkman Publishing Co., Inc., 1964), pp. 32-33.

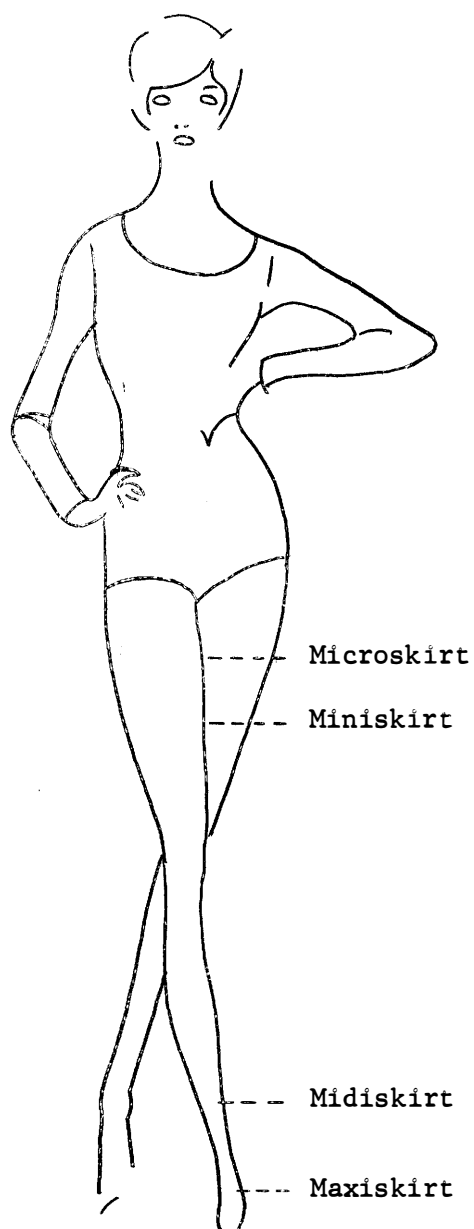


Figure 1. Various hem lengths.

Source: The Vogue Sewing Book, New York: Vogue Patterns, 1970.

Midiskirt. A skirt of a length about mid-calf, as shown in Figure 1.

Miniskirt. A skirt of a length between thigh and knee introduced by the London "Mod" designer, Mary Quant, as seen in Figure 1.¹⁹

Most fully-typical styles. This term refers to the styles that were worn by the majority of women.²⁰

Social class. A large group of families approximately equal to each other and clearly differentiated from other families in relation to prestige, occupation, possessions, interactions, class consciousness, and value orientations.²¹

Street dress. The kind of dress, more detailed than a simple shirtwaist or casual sports attire, worn by women for daytime calls, shopping, and positions of employment such as secretary or teacher.

Upper class. Big businessmen and top corporation officials compose this group. It contains an elite that exercise decisive political and economic power. Those women who read Vogue and Harper's Bazaar were assumed to be upper-class.²²

¹⁹Wilcox, op. cit., p. 323.

²⁰Kathryn Lee Ramsey, "An Analysis of the Relationship of the Order L-85 to the Silhouette of the Daytime-Street Dress From 1942-1950" (unpublished Master's thesis, The University of Tennessee, Knoxville, 1966), p. 4.

²¹Joseph A. Kahl, The American Class Structure (New York: Holt, Rinehart, and Winston, 1965), p. 12.

²²Kurt B. Mayer, Class and Society (New York: Random House, 1955), p. 40.

VII. PROCEDURE

Development of the study was presented in four major segments which describe the procedure. They are:

1. Method for establishing hemline fluctuations.
2. Selection of fashion illustrations.
3. Analysis of selected economic factors from 1921 to 1971.
4. Analysis of data.

Method for Establishing Hemline Fluctuations

The method of measuring hemlines was based on procedures used in previous studies concerning fashion change. Dr. A. L. Kroeber, Professor of Anthropology at the University of California, was the first to develop a method of measuring silhouette details in fashion magazines. He first employed the method, later followed by Nystrom, during his study concerning the fashion cycle from 1844-1919.²³ Whenever fashion magazines were available, Young also undertook a system of measuring to determine the most fully-typical costume worn each year from 1860-1937.²⁴

Ramsey established that the largest number of usable illustrations in the fashion magazines was available during the months when the styles for the coming seasons were introduced, February/March, August/September.²⁵ The same months were used for analysis of hemlines

²³Paul H. Nystrom, Economics of Fashion (New York: The Ronald Press Co., 1928), pp. 38-39.

²⁴Young, op. cit., p. 147.

²⁵Ramsey, op. cit., p. 21.

in this study. To secure data concerning hemlines, illustrations of the street dress to be measured were selected by stratified sampling. The first three fashion illustrations from the editorial segment of each issue which met the prerequisites were chosen to be measured. To insure as much accuracy as possible, illustrations were omitted in which the model shown was posed in an exaggerated stance or in which obstructive objects, such as accessories, prevented accurate measurement.

The total length of the figure was considered to be the distance from the center of the mouth to the tip of the toes. The center of the mouth was chosen as a point of measurement, instead of the top of the head, because the different hair styles could hinder accurate measuring.²⁶ Since a model usually places the weight of the body on the back foot, a more accurate measurement was obtained by measuring to the back rather than the front foot. All of the measurements of the hemlines, made in millimeters, were expressed in a percentage ratio of the total length of the figure. The percentage ratios of the hemlines measured were graphed for each year to illustrate the fashion change during the time period studied.

To convert the measurements made in millimeters to a percentage ratio of the total figure length, the following equation was used:²⁷

Let: X = distance of the skirt from the floor

A = total length of the figure

B = length from mouth to bottom of skirt

²⁶Nystrom, op. cit., p. 39.

²⁷Ramsey, op. cit., p. 22.

Therefore: $A - B = X$

$\frac{X}{A}$ = percentage ratio of distance of skirt from floor
to total length of figure

Selection of Fashion Illustrations

Fashion periodicals are considered to be a logical source of style information because the interest and demands of the readers must be reflected or the existence of the periodicals is endangered. The periodicals used were Vogue, Harper's Bazaar, Good Housekeeping, and Ladies' Home Journal, located in the library at The University of Tennessee at Knoxville, the public libraries of Knoxville, Chattanooga, and Atlanta, and the Library of Congress. Since fashion is usually in different strata of society at the same time, these four magazines were chosen because Vogue and Harper's Bazaar represent the "high fashion," whereas Good Housekeeping and Ladies' Home Journal represent the popular acceptance of a style.²⁸ Vogue was "set up for high fashion" and "intended for the economically secure," while Harper's Bazaar, established as the foremost competitor of Vogue, was "essentially a magazine of high fashion."²⁹ Good Housekeeping was founded as a household service journal, full of practical hints and interest for the family of moderate income.³⁰ Likewise, Ladies' Home Journal was

²⁸Bernice G. Chambers, Fashion Fundamentals (New York: Prentice-Hall, Inc., 1947), p. 65.

²⁹Theodore Peterson, Magazines in the Twentieth Century (Urbana, Illinois: University of Illinois Press, 1964), p. 269.

³⁰Frank Luther Mott, A History of American Magazines 1905-1930 (Cambridge: Harvard University Press, 1968), p. 143.

referred to as a "middle-class service magazine."³¹ By considering these four sources a picture was obtained as to what was being worn by the upper and middle classes of the populace during the time period involved.

Analysis of Selected Economic Factors

Selected economic events occurring during the period from 1921 to 1971 were examined. The factors that were searched out during ten-year periods included depressions and other major economic upheavals, recessions, inflationary periods, and wars. These factors were examined in light of their effect on the fashion scene as well as on the business world, and of their influence on the behavior of the upper and middle classes. Information on these selected factors was obtained from current economic histories of the United States, up-to-date accounts of the economic affairs of the United States in the twentieth century, and analyses of American economic development.

A study of the stock market fluctuations for each year from 1921 to 1971 was made using available data and information such as written descriptions of stock market behavior and the Dow Jones Stock Averages Chart 1921-1970, Appendix B, Table IV. These fluctuations were reviewed in relationship to their place in the general economic picture of the times.

Analysis of Data

Once the data from the fashion periodicals had been collected

³¹Peterson, op. cit., p. 301.

and charted, the fluctuations of the stock market averages had been graphed and studied, and selected economic factors had been examined, two series of charts were drawn: one series illustrated the movements of the stock market, and one depicted the movements of hemlines worn by upper class women and by middle class women. These two series of charts were then combined into one series of five charts, each chart illustrating the fluctuations of hemlines and the stock market for a specific ten-year segment of the study. The graphic comparisons are found in Figures 2 through 6. A comparison between the rise and fall of hemlines in both the upper and middle classes and the fluctuations in the stock market was made, and any similarities between the movements were noted.

Correlations were computed for both the hemline percentage ratios and the yearly highs and lows of the Dow Jones Industrial Averages. These computations were made by use of the Pearson product-moment coefficient of correlation, and tests of significance were computed using the correlated data, as seen in Appendix C, Table VI. Z coefficients were determined for the correlations and tested for significance, as found in Table I. The accepted level of significance for the r and z values was .05.

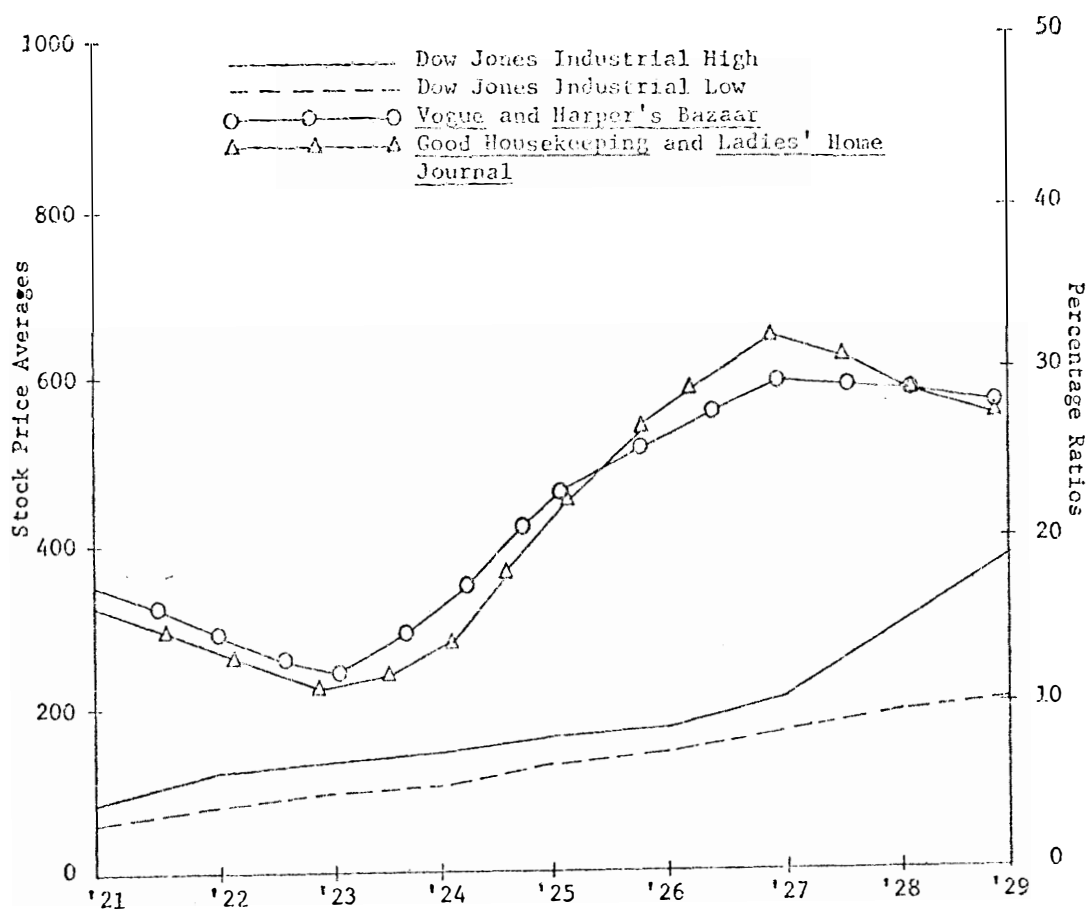


Figure 2. Yearly high and low of Dow Jones Industrial Stock Averages and hemline percentage ratios, 1921-1929.

(Dow Jones Industrial Averages based on data from the Dow Jones Stock Averages Chart 1921-1970, Dow Jones and Company, Inc., 1970.)

(Hemline percentage ratios based on data from February, March, August, and September issues of Vogue, Harper's Bazaar, Good Housekeeping, and Ladies' Home Journal.)

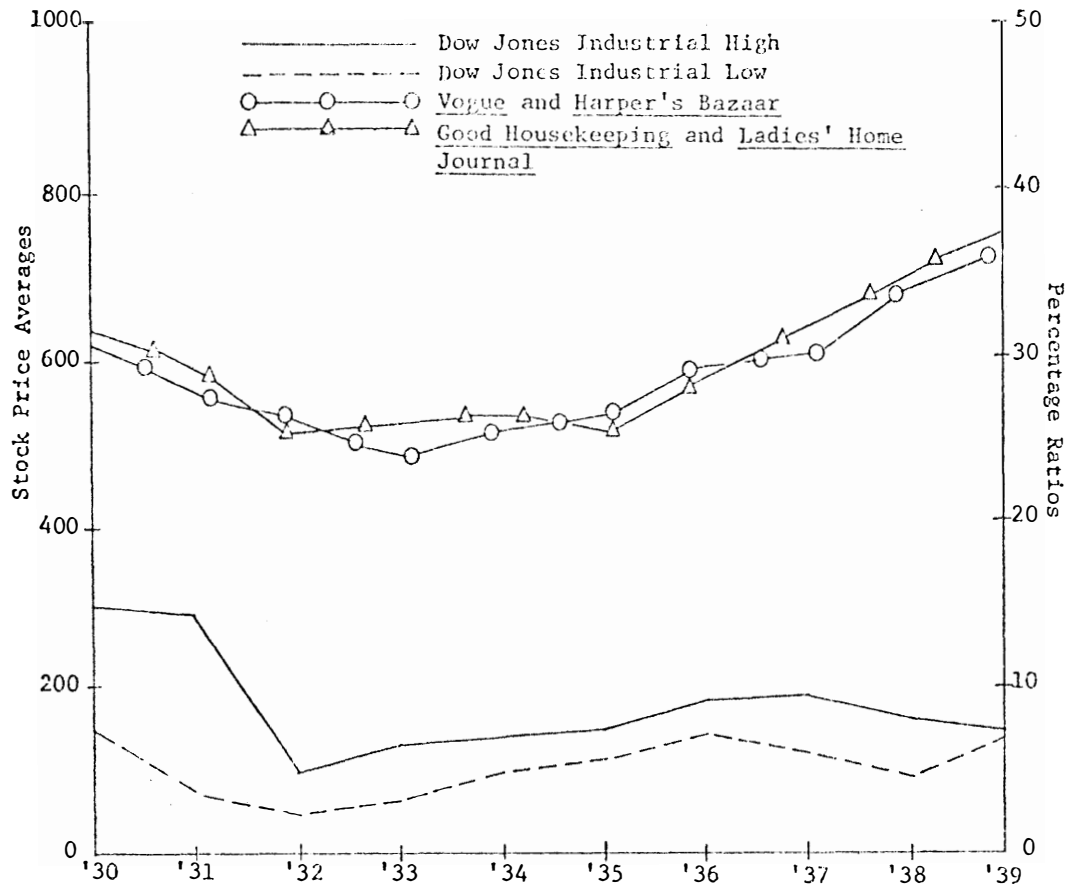


Figure 3. Yearly high and low of Dow Jones Industrial Stock Averages and hemline percentage ratios, 1930-1939.

(Dow Jones Industrial Averages based on data from the Dow Jones Stock Averages Chart 1921-1970, Dow Jones and Company, Inc., 1970.)

(Hemline percentage ratios based on data from February, March, August, and September issues of Vogue, Harper's Bazaar, Good Housekeeping, and Ladies' Home Journal.)

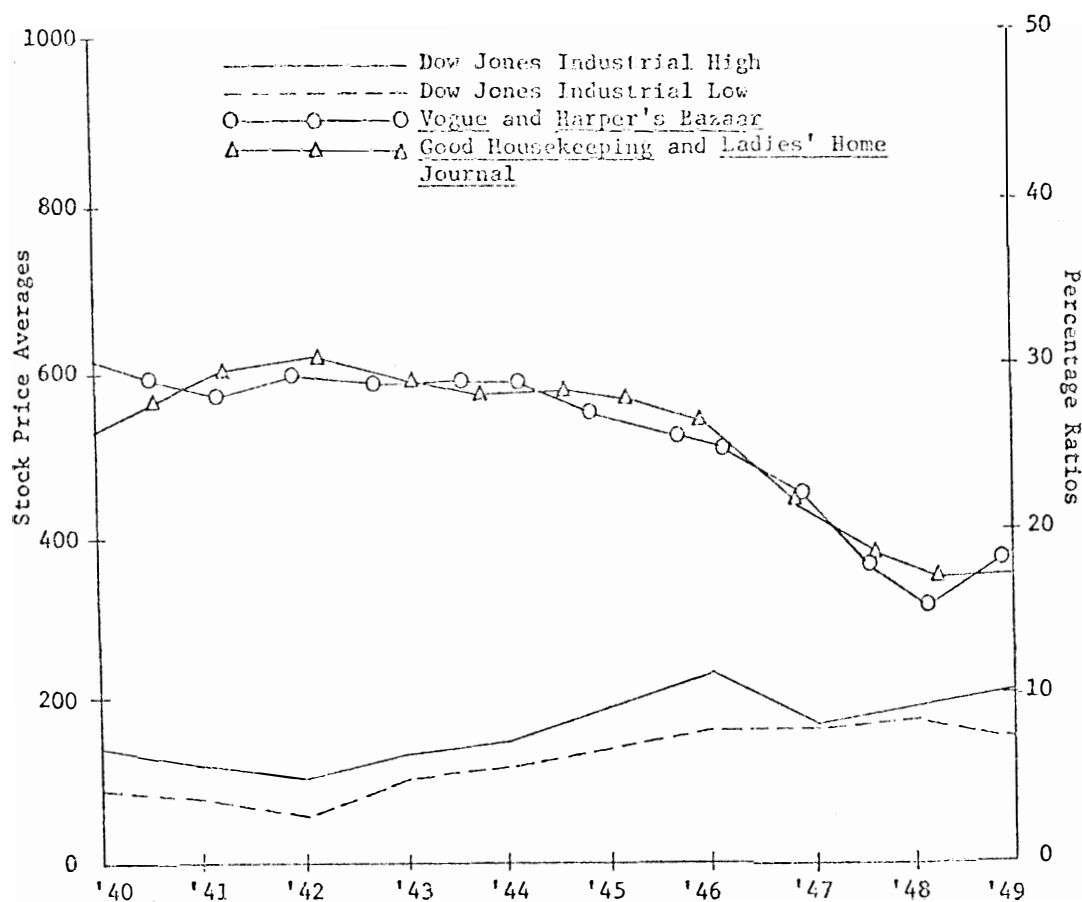


Figure 4. Yearly high and low of Dow Jones Industrial Stock Averages and headline percentage ratios, 1940-1949.

(Dow Jones Industrial Averages based on data from the Dow Jones Stock Averages Chart 1921-1970, Dow Jones and Company, Inc., 1970.)

(Headline percentage ratios based on data from February, March, August, and September issues of Vogue, Harper's Bazaar, Good Housekeeping, and Ladies' Home Journal.)

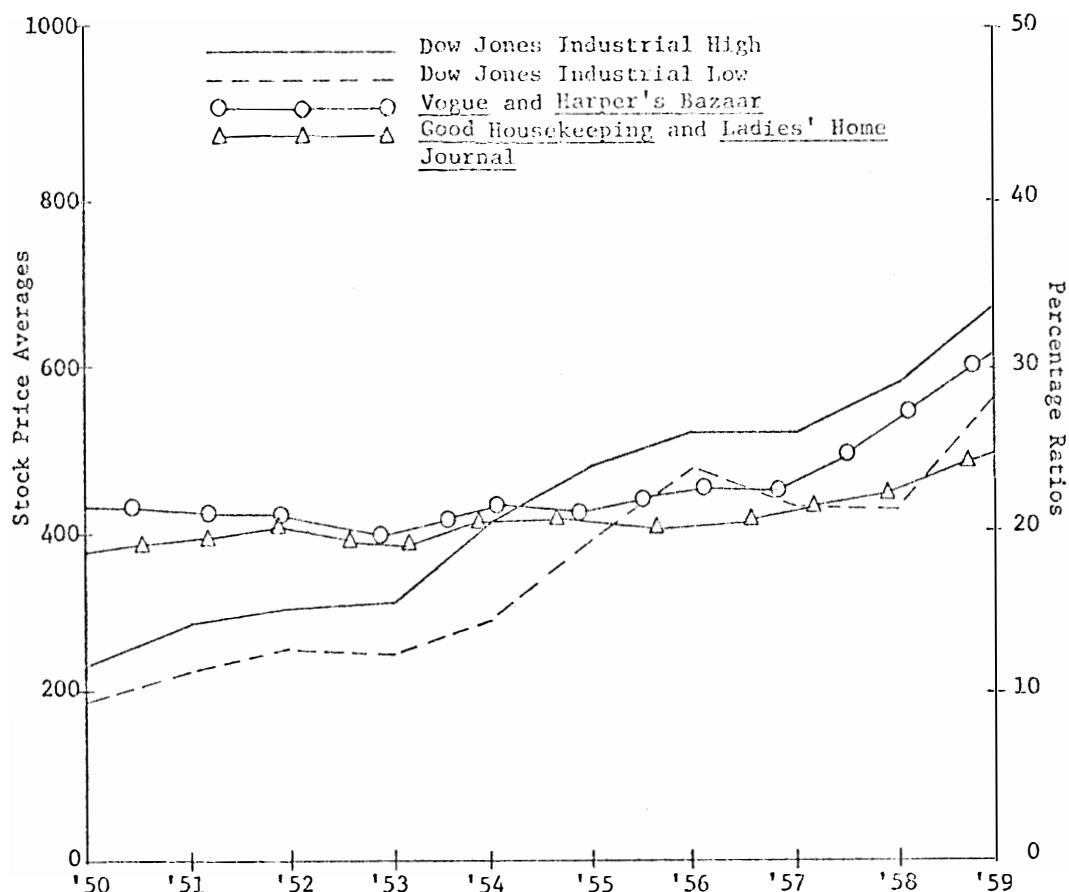


Figure 5. Yearly high and low of Dow Jones Industrial Stock Averages and hemline percentage ratios, 1950-1959.

(Dow Jones Industrial Averages based on data from the Dow Jones Stock Averages Chart 1921-1970, Dow Jones and Company, Inc., 1970.)

(Hemline percentage ratios based on data from February, March, August, and September issues of Vogue, Harper's Bazaar, Good Housekeeping, and Ladies' Home Journal.)

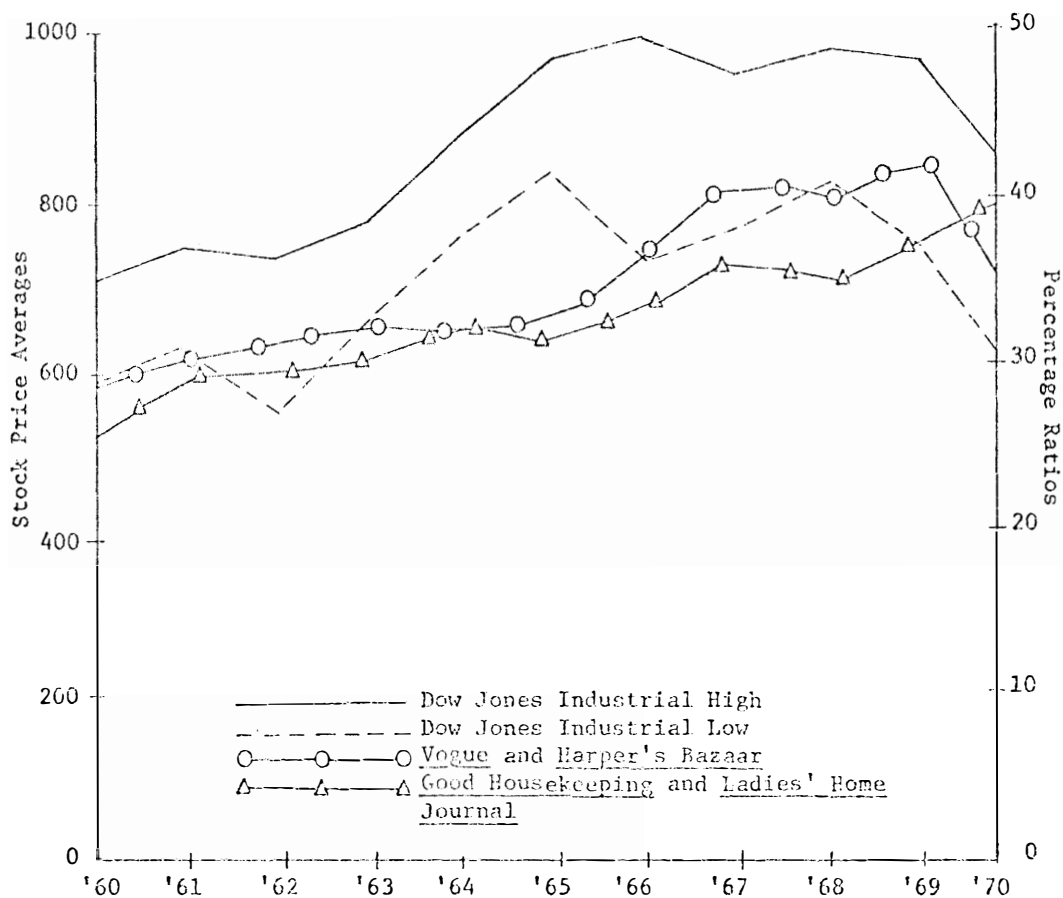


Figure 6. Yearly high and low of Dow Jones Industrial Stock Averages and headline percentage ratios, 1960-1970.

(Dow Jones Industrial Averages based on data from the Dow Jones Stock Averages Chart 1921-1970, Dow Jones and Company, Inc., 1970.)

(Headline percentage ratios based on data from February, March, August, and September issues of Vogue, Harper's Bazaar, Good Housekeeping, and Ladies' Home Journal.)

TABLE I
ANALYSIS OF Z DIFFERENCES OF HEMLINE MEASUREMENTS

Hemlines From Magazines by Social Class	r	z
Upper Class		
<u>Vogue</u>	0.78	1.05*
<u>Harper's Bazaar</u>	0.74	0.95*
Middle Class		
<u>Good Housekeeping</u>	0.70	0.87**
<u>Ladies' Home Journal</u>	0.63	0.74**

*Significant at .01 level.

**Significant at .05 level.

CHAPTER II

SELECTED ECONOMIC FACTORS AFFECTING THE AMERICAN ECONOMY

FROM 1921 TO 1971

The selected economic factors presented in Chapter II affected the American economy in various ways from 1921 to 1971. It was hypothesized that these factors may relate to the underlying fluctuations of hemlines and stock market averages during this period. A review of the economic activity by decades as demonstrated by the New York Stock Exchange and the Dow Jones Industrial Averages is presented because such activity is an important component of the economic structure of the United States.

The 1920's

The decade of the 1920's heralded a return to "normalcy" as the after effects of the First World War began to fade into history. As President Harding stated in his inaugural address, "America's present need is not heroics but healing; not nostrums but normalcy; not revolution but restoration; not surgery but serenity."¹ Prosperity resulting from World War I continued to be enjoyed by Americans in the twenties. A generous expansion of bank loans to private industry occurred, and a boom in automobile manufacturing and building construction was evident. By late 1920, this postwar boom was reaching the

¹Edward C. Kirkland, A History of American Economic Life (New York: Meredith Corporation, 1969), p. 483.

danger point--inflation was high, credit expansion had reached the legal limit, farmers were being hurt by an oversupply of commodities, and unemployment was common. In the mid-summer of 1921, a brief depression occurred as a result of this boom. A decline in government spending was seen, the United States ceased to make loans to Allies, exports and imports declined rapidly, and the European countries had no funds to make purchases abroad.² Prices were forced down for a six-month period, but by 1922 the deflation was over, and a period of much business activity and more normal conditions ensued.

The twenties were an era of prosperity and growth, due partially to increased efficiency in business and industry. Industrial production doubled as the productivity of the worker doubled. Real wages advanced, and both the national income and real income per capita increased substantially. The increased application of science to business resulted in continued industrial expansion. The comment was made that "Americans have applied intelligence to the day's work more effectively than ever before . . ."³

The industrial expansion rested on the manufacture of automobiles and electrical equipment and on the boom in building construction. The increased demand for automobiles led to the construction of roads and highways to the tune of \$2 billion annually.⁴ A growth in the

²Harold Underwood Faulkner, American Economic History (New York: Harper and Brothers Publishers, 1960), p. 603.

³Ibid., p. 607.

⁴Ibid.

production of radios, new appliances, and electric power itself was evident. The building boom was stimulated by high rents, the rapid increase of surplus wealth, and modern improvements. Other growth industries included consumer durables, the chemical industry, motion pictures, and public utilities. Some industries, however, declined during this era such as textiles, railroads, agriculture, coal, and the merchant marine. The railroads suffered because of the popularity of the automobile, the construction of better roads, and the expansion of transportation facilities in aviation and canal traffic. Two factors were responsible for the decline in agriculture--overproduction in world markets, and the world-wide falling-off in demand for commodities and the deflation of prices after World War I.⁵ Organized labor took a downturn when the federal child-labor laws were declared unconstitutional. A declining wage scale and the formation of "company unions" was also responsible for this trend.

The consolidation of American business was a popular tendency in the twenties. The iron, steel, and machinery group led the way, followed by the automobile industry, motion picture companies, public utilities, and banking. The consolidation of banking was most evident in the large cities. In 1921, there were 30,812 banks in the United States, but this number had declined to 22,000 in 1931.⁶ This merger movement was stimulated by widespread industrial prosperity, the artificial expansion of the war days which had left American industry

⁵Ibid., p. 625.

⁶Ibid., p. 611.

in an overbuilt and overexpanded condition, and the changing attitude of Americans who began to trust business. The Federal Reserve system created in 1914 was just being organized in the twenties. Savings increased four-fold, a rise in installment credit occurred, and life insurance companies did a good business. Slight recessions had taken place in 1924 and 1927, but by 1929, production was one-third greater than in 1920.⁷ The effort of the American people to redress the setback inflicted by an unusually destructive war had resulted in the greatest peacetime prosperity ever known to man.

All good things must come to an end, however, and this was the case in 1929 when the stock market crashed. Many people believed that the prosperity of the twenties was a plateau in economic achievement for the nation, from which it would climb to even greater heights. The optimism raised by advances in stocks was soon stilled by the weakness manifested in the market in September of that year. Though the market did recover day by day, the ultimate crash on October 29 was not unexpected by many businessmen. Certain industries (textiles, coal, and railroads) had failed to revive after the deflationary period in the early twenties, and agriculture had failed to respond after the war. There had been little or no upward trend in employment to match the population growth, and an increase in speculation had taken place. Some economists pointed to the fact that there had been an "increase in the proportion of the total income going to profits

⁷ Charles H. Hession and Hyman Sardy, Ascent to Affluence (Boston: Allyn and Bacon, Inc., 1939), p. 617.

and a corresponding decrease in the relative proportion going to wages and salaries."⁸ The Depression was on.

The primary reason for the Depression was the stock market crash, but other economic developments were also responsible for this catastrophe. Three waves of bank failures had occurred, and the government had adopted a restrictive monetary and fiscal policy prior to the crash. Great Britain had also departed from the gold standard which promoted the expectation that the United States would follow suit, and caused foreign holders of United States securities and bank accounts to cash them in for gold.⁹ All of these factors led to a contraction of the money supply, higher interest rates, reduced availability of credit, bankruptcy, and a lack of confidence in the economic future.

The decade of the twenties ended on a somber note as business and industrial activity fell off. The United States was thought to be foundering in a sea of depression from which she would never recover. Despair and hopelessness plagued the lives of everyone as the government strived to steady the sinking ship of state.

The 1930's

As Americans staggered under the heavy burden of the Depression, this economic crisis continued to pursue a jagged course well into the thirties. The severity of this economic upheaval was affected

⁸Faulkner, op. cit., p. 642.

⁹W. W. Rostow, The United States in the World Arena (New York: Harper and Brothers, Publishers, 1960), p. 8.

by an uneven decline in prices, a long-drawn-out series of crises in credit, a large public and private debt, and world economic conditions in general. The farmers' income declined, as did foreign trade, and the ranks of the unemployed rose to four million.¹⁰ National output and financial activity reached the lowest ebb in 1932.

President Hoover tried to put the nation back on its feet, the first time the Federal Government had ever made an attempt to alleviate the conditions created by a depression. He lowered income tax rates, raised the prices of commodities, and promised a bonus to needy veterans. In 1932, he created the Reconstruction Finance Corporation, which made loans to the states for relief purposes, and the Home Loan Bank System which serviced banks and other institutions handling mortgages.¹¹ Hoover's administration ended with the march of the "Bonus Army" on Washington, a demonstration protesting the poor relief measures of his administration.

In 1933, when Franklin Roosevelt took office, he was already prepared to deal with the Depression. First, in his efforts to remedy economic abuses, he proposed the Emergency Banking Act which declared a bank holiday across the nation. As he said:

What we seek is balance in our economic system--balance between agriculture and industry and balance between the wage earner, the employer, and the consumer. We seek also the balance that our internal markets be kept rich and large, and that our trade with other nations be increased on both sides of the ledger.¹²

¹⁰Hession and Sardy, op. cit., p. 627.

¹¹Ibid., p. 688.

¹²Faulkner, op. cit., p. 655.

His "New Deal" program meant extended government supervision, control, and activity, much of it being formulated by his "Brain Trust", a group of Columbia University professors knowledgeable in economic affairs.

In dealing with currency and credit, Roosevelt had three objectives: inflation, banking reform, and better supervision of the security and commission exchanges.¹³ Thus, the Banking Acts of 1933 and 1935 were passed, and the passage of the Securities Act of 1933, the Securities Exchange Act of 1934, and the Public Utility Holding Companies Act of 1935 followed. The Securities Act of 1933, often known as the "truth in securities law" required initial full disclosure in a required registration statement and prospectus in connection with the public offering of new securities by the issuing company or securities offerings by control persons.¹⁴ Three points were included in the Securities Exchange Act of 1934:¹⁵

1. Regulation of speculative credit.
2. Compulsion of continuing disclosure of company information and abolition of "corporate abuses."
3. Regulation of market and trading practices. This act also established the Securities and Exchange Commission to enforce the

¹³Ibid., p. 659.

¹⁴Frank G. Zarb and Gabriel T. Kerekes (ed.), The Stock Market Handbook (Homewood, Illinois: Dow Jones-Irwin, Inc., 1970), p. 29.

¹⁵William Greenleaf (ed.), American Economic Development Since 1860 (Columbia, South Carolina: University of South Carolina Press, 1968), p. 187.

proponents of this legislation. The Public Utility Holding Companies Act compelled holding companies to register with the SEC and gave it the power to supervise their transactions.¹⁶

In considering the plight of agriculture, the objective of the administration was to restore the farmer's purchasing power and his general economic position to that of the pre-World War I period. As a beginning, the Farm Relief and Inflation Act, which later became known as the Agricultural Adjustment Act, was authorized by Congress in 1933. This legislation applied to seven basic commodities--wheat, cotton, corn, hogs, rice, tobacco, and milk and milk products--and sought to cut surpluses and raise the income of the farmers.¹⁷ Roosevelt's second objective was debt reduction and security against foreclosure. Thus, the Farm Credit Act and various mortgage acts were endorsed, and the Tennessee Valley Authority Act was created to aid the farmers in this area.

To aid industry, the National Industrial Recovery Act (NIRA) was proposed to "assure reasonable profit to industry and living wages to labor."¹⁸ This measure introduced self regulation of businesses, curtailing of overproduction, increasing wages, shortening hours of labor, and raising prices. Public works were to be federally financed up to \$3,300,000,000.¹⁹ Any business which formulated a

¹⁶Hession and Sardy, op. cit., p. 732.

¹⁷Kirkland, op. cit., p. 511.

¹⁸Faulkner, op. cit., p. 665.

¹⁹Kirkland, op. cit., p. 502.

code governing its actions as required by the NIRA displayed a "Blue Eagle" on its premises.

The power industries came under stiffer regulation as a part of the "New Deal" program. One of the most significant acts concerned with these industries was the 1933 Muscle Shoals-Tennessee Valley Development Act.²⁰ The objectives of this legislation were the maintenance and operation of properties at Muscle Shoals, Alabama, the development of agriculture and industry in the Tennessee Valley, the improvement of navigation on the Tennessee, and the control of floodwaters from the Tennessee and Mississippi Rivers.

In dealing with relief and security, Roosevelt proposed the relief of the unemployed with the National Employment Service Act, the improvement of economic security of the wage-earner with the Social Security Act, and the strengthening of organized labor's position with the National Labor Relations Act.

With all the legislation passed to get the nation back on its feet, the "New Deal" was significant as the first real effort of the government to attack the Depression with economic weapons. The administration worked to promote inflation and a managed currency, the restoration of confidence, and the finding of jobs for the unemployed. It necessitated the expansion of government activities and more active participation in the economic and social life of the nation. The acceleration of the decline of laissez faire was noted by many economists.

²⁰Faulkner, op. cit., p. 669.

A slight recession occurred in 1937, but the government stepped in with corrective measures to steady the economy. By the end of the decade, the nation was back on its feet and had turned its head to listen to the rumblings of war in Europe.

The 1940's

With the beginning of hostilities in Poland in 1939, the United States began to think in terms of a second World War. In preparation for her entry into the war, a peacetime economy of idle men and plants was shifted to become the "arsenal of democracy."²¹ This armed conflict pulled the country out of the economic doldrums after the 1937 depression, creating a speculative boom. Industrial production was up, exports increased, wages were up, and income moved more rapidly than prices. Men, money, and materials were geared to war production.

Rationing and price control were strictly handled by the Office of Price Administration during the war. Tires, gasoline, fuel-oil, sugar, and coffee were some of the first commodities rationed, but by mid-1943, 95 percent of the food supply was being controlled.²² Labor shortages did occur in some instances but unemployment virtually disappeared. To finance the war, Congress passed the Revenue Act of 1940, and savings bonds were purchased by many Americans. Everyone worked for the "cause" to speed the end of the war and a return to peace.

²¹Hession and Sardy, op. cit., p. 709.

²²Faulkner, op. cit., p. 705.

After the surrender of Germany and the atomic bombing of Nagasaki and Hiroshima in 1945, the United States began a program of reconversion and decontrol. As a result of the war, the country now had an agriculture program where the amount the farmers could raise was limited and prices were governmentally administered. Old age and unemployment insurance were available and people worked for a minimum wage. Labor had won the right to bargain collectively, and a public works program had been established. At the end of 1946, price controls were lifted and the Employment Act of 1946, a commitment to full employment, had been made. The GI Bill of Rights of 1944 had already alleviated employment problems to some extent. A Council of Economic Advisors was appointed by the President to develop economic policies that would avoid economic fluctuations, maintain maximum employment, stabilize purchasing power, and foster economic growth.²³

By 1948, inflation and mounting shortages of consumer goods were two problems facing the new administration of Harry Truman. A mild recession set in for several reasons: the demand for capital and consumer goods had been satisfied; industrial production fell by over 10 percent; prices fell as private investment slowed down, and a sharp decline in export surpluses was noted.²⁴ Congress immediately reduced tax rates, and adopted the Marshall Plan to aid the reconstruction of western Europe. Government defense expenditures were stepped

²³Hession and Sardy, op. cit., p. 803.

²⁴Ibid., p. 807.

up and an increase in residential construction turned the tide so that by 1950, a major economic expansion was underway. A new prosperity was forecast for the ensuing decade.

The 1950's

On January 4, 1950, when President Truman took office, he stated, "We have met and reversed the first significant downturn in economic activity since the war."²⁵ The economy had been sufficiently stabilized after the recession, but inflation due to the Korean War plagued the nation in 1950 and 1951. No crisis was foreseen, however, until the end of 1952, when a steel strike plus a decline in military expenditures signalled another recession. High unemployment was the primary concern of the government, but by mid-1954, the recession eased due to a continued rise in residential construction and commercial building and a rise in spending by the Federal and local governments.

From late 1954 to early 1957, the economy went into a strong durable goods boom, particularly in automobiles and home appliances. A tremendous increase in plant capacity and a boom in investments took place. Business machines, electronics, computers, and the construction industries expanded to unanticipated heights. The labor force was increasing, but unemployment remained high. Some sectors of the national economy began to suffer, such as coal mining and agriculture where incomes and levels of living were not keeping abreast with those in the rest of the economy.

²⁵Ibid.

By the middle of 1957, another downturn occurred. A drop in investment was noted, and the demand for durable goods fell off. Excess capacity emerged in steel, appliances, motor vehicles, and aluminum. Unemployment reached a high of 7 percent.²⁶ Only the high level of federal expenditures kept the bottom from falling out of the economy. This recession lasted only eight months, but even after recovery, the unemployment level remained high. The year 1959 was a prosperous one even though unemployment was high, and the nation had to endure a 116-day steel strike. With a new decade on the horizon, the prospects for a booming economy looked good.

The 1960's

The sixties began on a prosperous note for the American people. The leading growth industries at the beginning of this decade were aircraft, industrial chemicals, gas and electric utilities, natural gas, electrical machinery, and rubber and plastic products.²⁷ But in order to prevent a recession when he took office, President Kennedy sent Congress an anti-recession program in February, 1961. The economy continued to lag in 1962 so the President asked for an emergency tax cut. Coupling this action with other fiscal and monetary policies, the administration succeeded in bringing the economy slowdown to a halt, and, in fact, inaugurated the longest period of domestic prosperity in the nation's history.

²⁶Ibid., p. 810.

²⁷Kirkland, op. cit., p. 552.

When President Lyndon Johnson came into office, he continued the economic policies begun by Kennedy. The Tax Act of 1964, proposed by Kennedy, was approved, as were the Medicare Bill, the Education Act of 1965, and the Civil Rights Law of that same year.²⁸ The drain on the economy from the undeclared Vietnam war began to be felt in the United States and the "War on Poverty" tried to get off the ground.

In 1968, when Richard Nixon was elected president, he inherited the Vietnam war involvement and increased unemployment. Strikes in industry became common, even though economic prosperity continued to be enjoyed by the nation's citizens. This prosperity brought with it a crisis in values, a rejection of the values of a middle-class business society. This questioning of values continued throughout the sixties and into 1970. University students had a compelling dissatisfaction with the state of America whose military and business interests the universities had been serving too faithfully and uncritically. Economic rewards alone did not satisfy the discontented and rebellious at a time when prosperity had reached an all-time high.

The economic development of the United States over the years from 1921 through 1970 has witnessed many fluctuations of both a progressive and recessive manner. The post-World War I adjustment of the economy was followed in turn by a boom, depression, wartime expansion, and the readjustment of employment and production at a high level.²⁹ The most serious economic upheaval of the nation was

²⁸Hession and Sardy, op. cit., p. 850.

²⁹Harold F. Williamson (ed.), The Growth of the American Economy (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1951), p. 699.

the Depression of the early thirties, but the nation was also plagued by recessions in 1921, 1937, 1948-49, 1953-54, 1957-58, and 1960-61.

As evidenced by the Depression and numerous recessions, the economic growth of the United States has taken place in a series of surges during which growth was especially rapid, followed by relapses when growth proceeded much more slowly. In the past, the culminating event of each period of retarded growth has been a business depression of unusual severity and almost always of unusually long duration. The cause of these fluctuations is still to be determined--it is not yet known whether they are the result of some stable mechanism inherent in the United States' economic structure or whether they are set in motion by the episodic occurrence of wars, financial panics, or other unsystematic disturbances.³⁰ All that is known is that these fluctuations do occur,

The New York Stock Exchange

In relation to the selected economic factors affecting the American economy from 1921 to 1971, the history of the New York Stock Exchange is one of similar behavioral fluctuations. The Exchange is one factor of the economy which moves in relation to the state of the national economy, as do the Dow Jones Industrial Averages, and both reflect the fluctuations of the economy in an upward or downward direction during the five decades under consideration.³¹

³⁰Ralph L. Andreano, New Views on American Economic Development (Cambridge: Schenkman Publishing Co., Inc., 1965), p. 378.

³¹Harvey A. Krow, Stock Market Behavior (New York: Random House, 1969), p. 22.

The New York Stock Exchange, first established in 1792, furnishes to the buyers and sellers of stocks and bonds opportunities for the transaction of their business.³² In 1817, a formal organization, the New York Stock and Exchange Board, was created to run the stock exchange, and this board was expanded after the Civil War, when the first electric stock ticker was also introduced. At the end of the nineteenth century, a new group of financial leaders took over the reins of the stock exchange and rose to power. This group included J. Pierpont Morgan, known in banking, railroad, and industrial combinations; Jacob H. Schiff of Kuhn, Loeb, and Company, a banker; Hill and Harriman, in railroads; Rockefeller, Rogers, Pratt, and Flagler, members of the Standard Oil Trust; and Andrew Carnegie and Charles Schwab, in the steel industry.³³ At this time, a wave of speculation in stocks on the stock market led to the Panic of 1893, and a second speculative wave occurred from 1897 to 1903.

At the turn of the century, expansion in trading occurred, and the United States went on the gold standard, causing a monetary inflation. In 1906, signs of distress were still evident, and in 1907 the "rich man's panic" occurred with bank runs being common.³⁴ The New York Stock Exchange came under fire in 1909 as a result of this panic and the Hughes Committee carried out an investigation and

³²The New York Stock Exchange (New York: Greenwood Press, Publishers, 1905), p. 35.

³³George L. Leffler and Loring C. Farwell, The Stock Market (New York: The Ronald Press Co., 1963), p. 94.

³⁴Ibid., p. 95.

recommended a program of self-regulation for the exchange. At this time, too, General Motors was formed from 24 small corporations. In 1912, the Pujo investigation scrutinized the "money trust" in the exchange, but all scrutiny ceased with the beginning of World War I. The exchange closed August 1, 1914, and did not reopen until December 12 of that year. Great public participation in government bond buying occurred as a result of the war, but trading activity took a decided downturn until 1919 when America began to emerge from a war status.

The 1920's introduced a new era to the United States, but this era began with a short but severe deflation which lasted until 1921. A market boom occurred in the late '20's when America became a great creditor nation. The government was friendly to big business, the popularity of common stocks mushroomed, and the volume of trading grew rapidly. On the New York Stock Exchange, these conditions were reflected in a marked upswing of trading activity and in more public participation. The market value of stocks listed rose from over \$27 billion at the close of 1924 to nearly \$90 billion in September, 1929. The annual trading volume was up from 173 million shares in 1921 to over one billion shares in 1929.³⁵ On October 29, 1929, the stock market crashed. From 1929 to mid-1932, the United States suffered through its longest and worst depression. The Dow Jones Average fell 89 percent on "Black Thursday", shares of stock numbering

³⁵Zarb and Kerekes, op. cit., p. 76.

16.4 million changed hands.³⁶ The market crash signalled the "end of the rich."³⁷

Normalcy returned to the United States in late 1932. In 1933, a Senate investigation by the Committee on Banking and Currency (Pecora investigation) critically looked at the New York Stock Exchange. As a result, four federal laws were developed, including the Banking Act of 1933, the Securities Act of 1933, the Security Exchange Act of 1934, and the Public Utility Holding Company Act of 1935. The Security Exchange Act of 1934 was of special interest because it subjected all stock exchanges to extensive government control for the first time in history. This act eventually led to a reorganization of the stock exchange in 1938.

On the eve of World War II, the stock market rose somewhat and maintained a steady course during the conflict, but the period of three years from 1946 to 1949 after the war saw stocks decline. A mild recession occurred in 1953 before the appearance of an amazing bull market from 1953 to 1955. In 1955, the Senate Committee on Banking and Currency again examined the stock market and its policies. And in 1961, a broad study by the Securities and Exchange Commission was conducted into the ways in which the different operations were performed in the exchange market and by the brokerage community.³⁸

³⁶Leffler and Farwell, op. cit., p. 98.

³⁷Robert Sobel, Panic on Wall Street (New York: The MacMillan Co., 1968), p. 391.

³⁸Leffler and Farwell, op. cit., p. 101.

Thus, the New York Stock Exchange dates from the early beginning of the American nation and has undergone periodic scrutinization in the regulation of its operation.

The Dow Jones Averages

The stock market, here referred to as the New York Stock Exchange, generally moves in an upward or downward direction, according to stock prices quoted on the market. These general price movements are usually described by market average in common use because these popular market averages are the most convenient means for measuring the changes in market prices.³⁹ The best-known of these averages is the Dow Jones Averages, which began in 1884, when the railroad average consisting of 11 stocks was created.⁴⁰ This one stock average was kept until 1897 when separate averages were started for both railroads and industrials. The rail average was expanded to 20 railroads, and the industrial average consisted of 12 but was later expanded to 30. The first utility average, made up of 18 stocks, was begun in 1929, but this average was later cut to 15.⁴¹ A listing of the stocks composing the Dow Jones Rail, Industrial, and Utility Averages will be found in Appendix A.

The Dow Jones Averages in 1970 consisted of four averages-- railroads, industrials, utilities, and a composite which is supposed

³⁹Krow, op. cit., p. 22.

⁴⁰Leffler and Farwell, op. cit., p. 483.

⁴¹Ibid., p. 484.

to reflect conditions in all divisions of the market and is officially announced at half-hour intervals throughout the day. The components of the Dow Jones Averages are precisely the corporations with the heaviest capitalizations that most influence the weighted averages.⁴² The three largest companies, American Telephone and Telegraph, General Motors, and Standard Oil of New Jersey, comprise 10 percent of the number of shares on the "Big Board." The average is achieved by adding the prices of all stocks together and dividing by their number. The divisor technique is used in figuring the average, the divisor being the figure which, when divided into a new aggregate of prices, will give the same price level as before a split.⁴³ The prices of corporate shares are determined by the state of and outlook for the economy, by the fortunes of participating industries, by performances (past, present, and potential) of participating companies, and by the millions of individual estimates of all these things by the investing public.

The Dow Jones Averages are based on the Dow theory, first offered by Charles H. Dow, the founder of the financial news agency, Dow, Jones, and Company, and one of the owners of The Wall Street Journal.⁴⁴ The Dow theory is a mechanical technique for recognizing a trend, using previous high and low points in the averages as benchmarks. It provides a framework for judging the future of the market

⁴²Krow, op. cit., p. 24.

⁴³Gilbert W. Cooke, The Stock Market (New York: Simmons-Boardman Publishing Corporation, 1964), p. 65.

⁴⁴Robert Rhea, The Dow Theory (New York: Barron's, 1932), p. 1.

from its past performance. The main point of the Dow theory is that the "stock market reflects absolutely everything that everybody knows about the economic status of the country."⁴⁵ The Council of Economic Advisors includes stock prices as one of its 37 lead indicators of the state of the economy, according to Krow.⁴⁶ The stock market is "the epitome and essence of capitalism, a mirror of American business."⁴⁷

Many investors believe that the Dow Jones Averages discount everything. The fluctuation of the daily closing prices of the Dow Jones Railroad and Industrial Averages provide "a composite index of all hopes, disappointments, and knowledge of everyone who knows anything of financial matters, and for that reason, the effects of coming events (excluding acts of God) are always properly anticipated in their movement."⁴⁸ The averages quickly appraise any such calamities as fires or earthquakes.

The Dow theory is based on three market movements:

1. A broad primary trend that usually lasts a year or more and is composed of bull or bear markets (the bull market rises while the bear market declines).
2. A shorter secondary trend or countermovement which lasts one to three months.

⁴⁵Krow, op. cit., p. 27.

⁴⁶Ibid.

⁴⁷Edwin A. Roberts, Jr., The Stock Market (New York: Franklin Watts, Inc., 1965), p. 1.

⁴⁸Rhea, op. cit., p. 12.

3. A very short-term fluctuation lasting a few hours or days.⁴⁹

The single most important criterion of successful investment or speculation is the determination of the primary trend.

A major tenet of the Dow theory is that both the rails and industrials averages must confirm each other to give an authoritative prediction.⁵⁰ The rails average, based on 20 leading rail stocks, should reflect the present and future business of their respective roads, affect earnings, and show the movement of goods in commercial and industrial channels. The industrials average, based on 30 large corporate stocks, is used as an indicator of the volume of production of the country. The two averages, in theory, should discount changes in corporate earnings, dividends, production, and the movement of goods. The stock cycle is watched through the closing prices of these two averages at the end of each trading day. Both averages should confirm a new primary trend so that only when both averages go in the same direction is confirmation possible.

It is generally accepted by many people that Wall Street, and particularly the Dow Jones Industrial Average, reflects American life. "No political, diplomatic, or cultural organization of peoples is so sensitive to human threats and promises as the money market."⁵¹ It

⁴⁹Krow, op. cit., p. 28.

⁵⁰Ibid., p. 31.

⁵¹Robert Sobel, The Big Board (New York: The Free Press, 1965), p. vii.

is a key measure of the economic growth and development of the United States just as it has been in past decades and will continue to be in the future. The fluctuations of the stock market will be watched by those who study the nation's economy in hopes of being able to predict the future of the market. Asked what he thought stocks would do next, J. P. Morgan, a master of Wall Street, once replied, "They will fluctuate, young man, they will fluctuate."⁵² And so they will.

⁵²Ibid., p. 374.

CHAPTER III

FASHION, CLASS DISTINCTION, AND HEMLINE FLUCTUATIONS

After reviewing the historical occurrences of the New York Stock Exchange from 1921 to 1971 and selected economic factors affecting the American economy during this same period, an examination of fashion and class distinction was made. This study includes a look at the concept of fashion, its mirror-like qualities, and its determination by cultural factors such as class distinction. The factors affecting the American economy, and in turn, the upper and middle classes of society, will also be considered in the study of fashion and class distinction.

As a reflection of fashion, a review of hemline fluctuations from 1921 to 1971 has been included to show the various movements of hemlines during the time period involved.

Fashion as defined by Brenninkmeyer, is the prevailing usage of dress adopted by society for the time being.¹ It is the result of the acceptance of certain cultural values, all open to relatively rapid influences of change. When one sees fashion or is exposed to it, a cue as to the cultural values as well as the social relationships of an age are presented or reflected. This reflection could be compared to that of a mirror illustrating the theory

¹Ingrid Brenninkmeyer, The Sociology of Fashion (Druck: Verlag P. G. Keller, 1963), p. 4.

of Brenninkmeyer that fashion is a "mirror of the soul."²

Fashion as a mirror is composed of styles which change annually to satisfy the human desire for imitation and the demand for social adaptation. It is one of the many forms of life by which man seeks to combine the tendency toward social equalization with the desire for individual differentiation and change. Style, according to Nystrom, is a characteristic or distinctive mode or method of expression, presentation, or conception in the field of some art.³ Changing styles are indicative of Veblen's rule of conspicuous consumption; he said that fashion innovation must be more beautiful than that it displaces, meeting an aesthetic need, but must also meet a standard of expensiveness, equating to social equalization.⁴

Fashion innovation occurs periodically as a result of many factors. Nystrom listed three primary factors responsible for innovation--dominating events, dominating ideals, and dominating groups.⁵ Kroeber noted that revolution, war, and sociocultural unsettlement in themselves did not produce fashion changes, but they disrupted the accepted dress style and led to its overthrow or inversion.⁶ He stated that fashion bowed to the principle of "civilizational determinism",

²Ibid.

³Paul H. Nystrom, Economics of Fashion (New York: The Ronald Press Co., 1928), p. 2.

⁴Thorstein Veblen, The Theory of the Leisure Class (New York: Viking Press, Inc., 1931), p. 174.

⁵Nystrom, op. cit., p. 83.

⁶A. L. Kroeber, The Nature of Culture (Chicago: University of Chicago Press, 1952), p. 371.

that what happened in the world influenced the clothing worn by individuals and resulted in continual change.⁷

As fashion is determined by cultural factors, it is also established by the social structure in which those who wear fashion live. "Fashion is the right of all men, no matter to what part of society they belong."⁸ Appearance is of great importance in a social system based on status because dress as fashion is an external sign of status. Fashions differ for different classes--the fashions of the upper stratum of society are never identical with those of the lower. Simmel says the character of fashion demands that it be exercised at one time only by a portion of a given group, the great majority being merely on the road to adopting it.⁹ This idea follows along the lines of the "trickle down" theory where new fashion originates in the upper class and eventually works its way down to the lower class.

Almost every article of clothing from ancient times until today has performed the function of indicating superior rank or lack of rank of the wearer, according to Langner.¹⁰ Social superiors used and still use their dress to differentiate themselves from their inferiors. Roach and Eicher stated that the importance of a given

⁷ A. L. Kroeber, "On the Principle of Order in Civilization as Exemplified by Changes of Fashion," American Anthropologist (XXI, July-September, 1919), 261.

⁸ Brenninkmeyer, op. cit., p. 175.

⁹ George Simmel, "Fashion," American Journal of Sociology (LXII, May, 1957), 547.

¹⁰ Lawrence Langner, The Importance of Wearing Clothes (New York: Hastings House, 1959), p. 36.

role in life and the intensity of role taking for an individual are often reflected in the clothing he wears.¹¹ An individual may use his dress to express his relationship to his environment and to enable him to fit into that environment. Thus, imitation in dress has occurred in past centuries and has been responsible for much heterogeneity of dress. It has also satisfied the individual's desire to be one of the group.¹² The individual may use dress to express group affiliation and the values and standards held by the group. Dress may also be used to indicate his rank within the group or his place within the power structure, thus letting everyone know where he fits into society.¹³

According to Langner, clothing has played a significant part in the social evolution and in stratifying a race or a people into different groups having somewhat different characteristics. In the United States, this class differentiation has been based partially on standards of wealth and possession.¹⁴ Rosencranz felt that the use of clothing as a guide to the position of an individual was important. It could enable one to determine the social status of an individual

¹¹Mary Ellen Roach and Joanne Bubolz Eicher, Dress, Adornment, and the Social Order (New York: John Wiley and Sons, Inc., 1965), p. 35.

¹²E. B. Hurlock, The Psychology of Dress (New York: The Ronald Press Co., 1929), p. 38.

¹³Roach and Eicher, op. cit., p. 6.

¹⁴Langner, op. cit., p. 102.

and thus avoid social errors.¹⁵ Dress used as a means of social stratification was evident in the available fashion magazines of the twentieth century. Many readers were influenced by the new styles introduced each spring and fall, including such details as colors, fabrics, line and design, sleeves, waistlines, collars, and hemlines. Differences in the styles of the upper and middle classes could be noted in many of the fashion illustrations in these magazines.

Differences in hemlines of the upper and middle classes demonstrated this constantly changing aspect of fashion, the introduction of new styles. The history of hemline fluctuations is an interesting and oftentimes amusing review of a somewhat dictated yet uncontrolled facet of the fashion world.

Hemlines of women's street dress have fluctuated continuously since 1921, though they began to move in the early 1900's. In the 1920's hemlines of women's dress could be seen hovering around the ankles. Most skirts were still tightly fitted at the bottom, reminiscent of the hobble skirt which became popular in 1914-1915. Following the hobble skirt, the next natural stage in the development of the skirt was a shortening to compensate for discomfort suffered in the previous decade. By 1924, skirt lengths had reached the knee, resulting in denouncement from many pulpits in America. A group of Episcopalian churchwomen in New York tried to start an organization to discourage

¹⁵Mary Lou Rosencranz, "Clothing Symbolism," Journal of Home Economics, (LIV January, 1962), 18.

fashions involving "an excess of nudity."¹⁶ In the Utah legislature a bill was introduced providing a fine and imprisonment for any woman who appeared in public with "skirts higher than 3" above the ankle," and in Ohio a bill sought to prohibit "any female over 14 years of age" from wearing "a skirt which does not reach that part of the foot known as the instep."¹⁷

One of the most striking effects of short skirts was that they compelled women to pay much more attention and to spend much more money on shoes and stockings. All stockings became flesh-colored and boots began to be worn. Skirts had never been so short, but by the end of 1927, dress had reached its minimum length. Designers made every effort to bring in longer skirts using devices such as side-draperies, skirts longer at the back than at the front, and transparent overskirts.¹⁸

By 1930 hems had reached a point 10 to 12 inches from the floor which resulted in a mid-calf look. Skirts remained at this level through most of the thirties until the beginning of World War II, when a sudden shortening of skirts occurred. The order L-85 was issued by the Federal Government in 1942 to conserve the use of fabric and this caused a shortening of skirts because less fabric was used in construction

¹⁶James Laver, Women's Dress in the Jazz Age (London: Hamilton, Ltd., 1964), p. 22.

¹⁷Ibid.

¹⁸Mila Contini, Fashion (New York: The Odyssey Press, 1965), p. 297.

of the skirts.¹⁹ Hemlines remained stationary at knee-length during the war.

In 1946, however, dressmakers began making longer dresses with greater sweep to the skirts and with pockets, matching hoods, extra-wide cuffs, sashes, and belts. A rumor had been circulated that the Civilian Production Administration order L-85 would be dropped on November 12, 1946, but on October 15 the CPA revealed that most of L-85 would stay in effect indefinitely.²⁰ It forbade dressmakers to sell longer garments, threatened to freeze their stocks, and ordered imported gowns cut to fit the CPA style regulations. The penalty for sellers of extra-legal dresses was one year in prison or \$10,000 fine, or both.²¹ The government claimed that extra cloth could not be spared and that a change in dress styles would require a change in shoe styles that would divert scarce hard lumber from housing to shoe lasts.²² Many retailers were stuck with longer dresses but they sold many two-piece dresses as separate garments and snipped off extra length of one-piece garments.

In 1947, with fashion still in the doldrums, a young Paris couturier, Christian Dior, created a silhouette called the "New

¹⁹Kathryn Ramsey, "An Analysis of the Relationship of the Order L-85 to the Silhouette of the Daytime-Street Dress From 1942-1950," unpublished Master's thesis, The University of Tennessee, Knoxville, 1962, p. 15.

²⁰"Hold That Hemline," Time, 48 (October 21, 1946), 90.

²¹Ibid.

²²"Why Skirts Are Longer: Antidote for Business Lag," U.S. News, 23 (October 10, 1947), 24.

Look", featuring swirling dresses with ankle-length hemlines, closely-fitted jackets with wavy panels over the hips, and rounded shoulders. He maintained that the short knee-length skirt was "most unaesthetic and anti-feminine."²³ Many women objected to the longer skirts and organized consumer resistance efforts such as "little below the knee" clubs with slogans like "Mr. Dior, we abhor dresses to the floor."²⁴ Despite many objections, skirts did remain long during the first half of the fifties.

Hemlines began creeping up in 1957 when designer Balenciaga introduced the "sack" or "chemise" which completely eliminated the waistline.²⁵ Once dresses began falling loosely from the shoulders, without a pinched-in waist, hemlines were free to rise without destroying the proportion of the line.

In 1961, Pierre Cardin first showed dresses revealing knees and boots which hid them.²⁶ Courrèges took over and launched a revolution with the short skirts simultaneously with a handful of English designers, among them, Mary Quant. Mary Quant was credited with the introduction of the miniskirt by many designers who said Courrèges merely refined her idea.²⁷ However, some Parisians referred

²³Gisele D'Assailly, Ages of Elegance (Paris: Librairie Hachette, 1968), p. 232.

²⁴"Why Skirts Are Longer: Antidote for Business Lag," op. cit., p. 24.

²⁵"The Battle of the Hemline," Newsweek, 75 (March 16, 1970), 74.

²⁶D'Assailly, op. cit., p. 232.

²⁷"The Hemline Dilemma: Which Length for You?" Good Housekeeping, 167 (July, 1968), 74.

to Courrèges as the "lord of the miniskirt," and said it was he who "dotted the 'i,' crossed the 't,' and chopped the skirt."²⁸ Mary Quant popularized the miniskirt in England, and by 1962, the short skirt was seen in the United States. The miniskirt hovered in indecision for several years as if debating to go up or down, but Paris took the affirmative in 1966, and soon not only the "mini" but also the "micro" were worn on both sides of the Atlantic.

The miniskirt created a furor in many countries, first appearing in small, offbeat boutiques and far-out discotheques. It was referred to as the "attire of eternal youth."²⁹ The American young grabbed it and recognized no boundaries nor felt "no standard commitments to it."³⁰ Rudi Gernreich was the first United States designer to raise skirts well above the knee. The final conquest of the miniskirt in America began in 1967, after several years of prodding by hippies in the United States and London,³¹ and by early spring of that year, the last pockets of resistance--the small towns and the Deep South--had crumbled.

The miniskirt look created an excitement in the fashion industry and in women's apparel. The "mini" was seen as a dividing line

²⁸Phyllis Lee Levin, "The Short, Short, Short Skirt Story," The New York Times Magazine (March 20, 1966), 37.

²⁹"The Battle of the Hemline," op. cit., p. 74.

³⁰Levin, op. cit., p. 37.

³¹"The Mini Goes Max," Forbes, 99 (May 15, 1967), 68.

between the generations, "a flag of protest, and an emblem of the morals and mores in transition."³²

Reactions toward this new fashion ranged from wide-spread acceptance to utter disgust. The designer Norman Norrell called it a "new lease on life," but Coco Chanel referred to it as "an exhibition of meat,"³³ "the most absurd weapon woman has ever employed to seduce men."³⁴ The short skirts were seen as a trend toward unity. They were bought by the young at first, but time saw many older women succumb to their allure.

Most dress manufacturers and retailers called a dress or skirt a miniskirt if there was enough gap between the knee and hem for an observer to get a good idea of the thighline--usually four or more inches above the knee.³⁵ But skirts were worn as high as eight inches above the knee, especially in England where the "micro" was quite popular. The "micro" was defined as just covering the hips.³⁶

The higher hemlines inadvertently created a need for new accessories. They boosted the demand for textured, opaque, colored, and fishnet hose. Pantyhose reached a popularity unknown to manufacturers before the miniskirt craze. The new longer hosiery styles

³²Levin, op. cit., p. 37.

³³"Onward and Downward with Hemlines," Life, 68 (March 13, 1970), 45.

³⁴"Next, the Maxiskirt?" Time, 89 (May 12, 1967), 67.

³⁵"The Mini Goes Max," op. cit., p. 68.

³⁶Ruth Turner Wilcox, The Dictionary of Costume (New York: Charles Scribner's Sons, 1969), p. 323.

were made with shortened bands or welts at the top of the stockings, some welts being embroidered with fancy designs of birds, bees, and hearts.³⁷ Slipmakers sold more short slips than standard lengths, and girdles had to be shortened. Shoes grew flatter and simpler, and boots were worn by many. Victims of the miniskirt were ordinary nylon stockings, garter belts, long girdles, and high-heeled shoes.

But even with all the popularity enjoyed by the miniskirt, a rustling in the background began to be heard, dating from 1966 before the "mini" really reached wide acclaim. The "midiskirt" appeared on the fashion scene, introduced by Marc Bohan with his Russian officer's coats and mid-calf length capes.³⁸ American teenagers took up the costume craze, wearing "granny dresses" and the military coats. The movie "Bonnie and Clyde" reintroduced the nostalgic clothing of the '30's, and "Doctor Zhivago" created a return to the romantic look.

In 1969, the "maxi" coat, solid fabric from neck to ankle, was introduced. It was recommended for the young (20-25), and was accepted by most designers as a fad and not a fashion. After the "maxi" came out and settled into a slow-selling business prospect, the "midi" made another bid for followers, not having been too successful in 1966. In a January, 1970, fashion showing, Italian couturier Valentino dropped his skirts to mid-calf.³⁹ Women's Wear Daily immediately

³⁷"How High the Thigh?" Newsweek, 67 (March 28, 1966), 76.

³⁸"Stopping the Escalation," Time, 88 (August 5, 1966), 46.

³⁹"The Look of the Damned," Newsweek, 75 (February 2, 1970), 72.

seized on the Visconti film, "The Damned," which featured dress styles of the 1930's German aristocracy, and coined the word "longuette" for the new length.⁴⁰ The introduction of a new hemline was reminiscent of the "New Look" created by Dior in 1947.

⁴⁰"The Battle of the Hemline," op. cit., p. 74.

CHAPTER IV

COMPARISON OF FLUCTUATIONS OF HEMLINES OF THE UPPER AND MIDDLE CLASSES AND THE DOW JONES AVERAGES

As a basis for the comparison of fluctuations of hemlines of the upper and middle classes and stock market averages from 1921 to 1971, selected economic factors and hemline fluctuations were reviewed in the preceding chapters. Chapter IV reports the comparative findings of upper and middle class hemline fluctuations and the Dow Jones Averages.

In the decade of the 1920's, the hemline fluctuations of both the upper and middle classes followed the same general trend, descending to a low point in 1923, then ascending to an apex in 1927, and descending again in the last two years of the decade as shown in Figure 2, page 17. The fluctuations were quite similar, year for year, for both classes in the twenties, although the hemlines of the middle class reached lower and higher points in the twenties than did those of the upper class. The Dow Jones Averages, however, began from a low point in 1921 and climbed steadily higher to an apex in 1929, as illustrated in Figure 2. Hemline fluctuations did not correspond to stock market fluctuations in the 1920's.

As seen in Figure 3, page 18, both upper and middle class hemline fluctuations in the 1930's followed a similar trend, descending to a nadir in 1933, then ascending during the remainder of the decade.

In 1933, the fluctuations of the upper class hemlines reached a lower point than those of the middle class, but all hemlines followed each other closely in the years from 1934-1939. The Dow Jones Averages, Figure 3, page 18, maintained a steady balance throughout the thirties after hitting a low point in 1932. Hemline fluctuations described an ascending posture in the 1930's while stock averages followed a horizontal movement.

In the 1940's, the hemline fluctuations of the upper and middle classes see-sawed back and forth, but both followed a general trend, remaining stable from 1940 until 1944 when they began to descend to a low in 1948, then took an upturn into the fifties. These fluctuations are illustrated in Figure 4, page 19. The Dow Jones Averages maintained a steady position and indicated a minute rise by the end of the decade, as shown in Figure 4. Both hemline and stock market fluctuations followed a horizontal course from 1940 to 1945 when hemlines began to descend and stock market averages began to ascend.

Upper class hemlines in the decade of the 1950's remained higher than those of the middle class, particularly in the years from 1957 to 1960 when a noticeable difference between the two was graphically evident. According to Figure 5, page 20, the fluctuations of both classes increased upward slowly during these years so that by 1959 hemlines were on the rise. The fluctuations of the Dow Jones Averages, as with the hemlines, showed a slow rise upward throughout the fifties, as evidenced by Figure 5.

In the 1960's, the hemlines of the upper class remained higher than those of the middle class for every year except 1964 and 1970,

when upper class hemlines descended as middle class hemlines continued to rise. Hemlines of both classes reached peaks in 1967 and 1969, although middle class hemlines continued to rise in 1970. These fluctuations are illustrated in Figure 6, page 21. The Dow Jones Averages from 1960 through 1970 rose steadily, reaching peaks in 1966 and 1968, and descending in 1970, as shown in Figure 6. Both hemlines and stock averages described an upward course in the 1960's until 1970, when they began to descend.

During the 50 years from 1921 to 1971, as seen in the visual comparison by graphic presentation of hemline and stock market fluctuations, (Figure 7) hemline fluctuations of the upper and middle classes and stock market fluctuations did not correspond to each other in their movements. Hemlines first descended then ascended in the 1920's while the Dow Jones Averages climbed steadily upward. In the 1930's, hemlines described an upward posture as the stock averages followed a horizontal movement. Both hemline and stock market fluctuations followed a horizontal course from 1940 to 1945 when hemlines began to descend and stock market averages began to ascend. A slow upward rise occurred in hemlines and stock averages in the 1950's, and this course continued in the 1960's until 1970 when both types of fluctuations began to descend. Although a time lag between the upper and middle classes was hypothesized, no such lag was revealed except for the last two decades of the study.

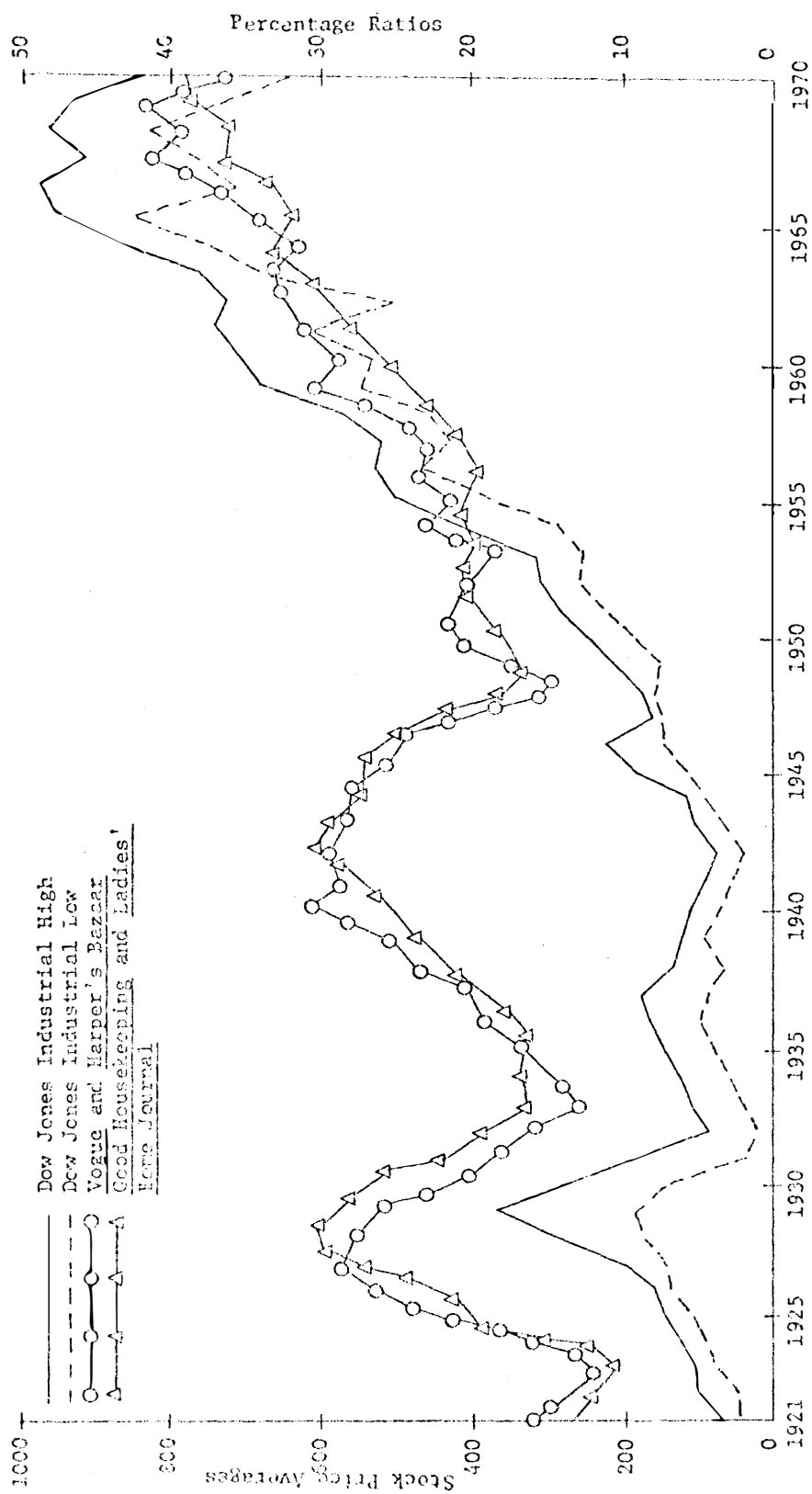


Figure 7. Yearly high and low of Dow Jones Industrial Stock Averages and hemline percentage ratios, 1921-1970.

CHAPTER V

ANALYSIS OF DATA

In an attempt to determine any relationship between prevalent economic factors, as measured by stock market fluctuations, and hemline fluctuations, the collected data were analyzed. Correlations were computed to determine any relationship between hemline measurements as converted to percentage ratios of the distance of the skirt from the floor to the total length of the figure and the yearly highs and lows of the Dow Jones Industrial Averages. These correlations were computed by use of the Pearson product-moment coefficient of correlation;¹ the computations are shown in Appendix C, Table V.

A coefficient of correlation (r) is a numerical representation of the extent to which two things are related and to which "variations in one go with variations in the other."² The coefficient of correlation range is:

. . . from a value of +1.00, which means perfect positive correlation, through to zero, which means complete independence or no correlation whatever, down to -1.00, which signifies perfect negative correlation.³

The test of significance determines whether an obtained r is sufficiently high to indicate that an hypothesis of no relationship is untenable.

¹J. P. Guilford, Fundamental Statistics in Psychology and Education (New York: McGraw-Hill Book Co., Inc., 1956), p. 138.

²Ibid., p. 135.

³Ibid., p. 136.

Any coefficient of correlation that is not zero and that is also statistically significant denotes some degree of relationship between the two variables, but it is important to bear in mind that because two variables are strongly related, one does not necessarily cause the other.⁴

Tests of significance were completed using the data obtained from the correlation computations. The relationship of the measurements taken in the fashion periodicals and the Dow Jones Industrial Averages were highly correlated, being statistically significant at the .01 level for 49 degrees of freedom, as shown in Appendix C, Table VI. Levels of significance were determined using the Dow Jones Industrial Averages "highs" because the "highs" had more statistical potential than the "lows." This significance indicates a positive relationship between hemline fluctuations and the stock market "highs" for the years from 1921 to 1971.

When correlations are near +1.00 and samples are not large, a recommended procedure is to test differences between z coefficients.⁵ This test is especially applicable when the two correlations being compared arise from rather independent variables.

The z coefficients for the correlations, as shown in Figure 8, Appendix C, were determined by use of the conversion table, and the z differences were computed by the given equation. These differences

⁴Allen L. Edwards, Statistical Analysis (New York: Rinehart and Co., 1946), p. 101.

⁵Guilford, op. cit., p. 194.

were then tested for significance according to the correlation coefficient table. As shown in Table I, page 22, the z difference for the Vogue and Harper's Bazaar correlations was found to be statistically significant at the .01 level, and the z difference for the Good Housekeeping and Ladies' Home Journal correlations was found to be statistically significant at the .05 level. This statistical significance further corroborates the relationship between the fluctuations of hemlines and those of the stock market averages.

CHAPTER VI

SUMMARY AND DISCUSSION

Comparisons were made of fluctuations of hemlines worn by women of the upper and middle classes of society with fluctuations of stock market averages to determine if any relationship between selected economic factors and hemlines was evident.

Hypothesis number one stated: There will be a relationship between fluctuations in hemlines and stock market averages from 1921 to 1971 which will be affected by prevalent economic factors operant at the time.

The findings of the comparisons indicated that there was a positive relationship between selected economic factors, such as depressions, recessions, inflationary periods, and wars, as measured by stock market fluctuations, and hemline fluctuations for the 50 years of the study. This relationship was more significant when the Dow Jones Averages "highs" were used for purposes of comparisons than when the "lows" were used. Movements of hemlines and stock market averages are illustrated in Figure 7, page 61.

Positive relationships between hemline and stock market fluctuations were scattered over the five decades studied. In the decade of the twenties, the hemline fluctuations and the Dow Jones Averages ascended, due to the post-World War I financial boom. With the advent of the Depression in 1928, both hemlines and stock averages plummeted to a low point in 1932-33. A recession in 1948-49 caused the Dow

Jones "high" to fall just as hemlines dropped as a result of Dior's "New Look." Hemlines descended in 1957-58 along with stock price averages which fell as a result of a recession. This occurrence was the case in 1967-68, although hems and stock averages had both ascended to a high point in 1966-67 and in 1969.

However, in several instances, the two fluctuations did not move hand-in-hand. In 1923 when hemlines had descended to a low point, the economy was just recovering from a recession and the Dow Jones Averages were climbing to a new high. In 1937 when the nation entered a recession lasting through much of World War II, hemlines were rising. The L-85 order issued by the Federal government was probably largely responsible for the movement of the hemlines at this time.

Although there were several occasions when hemlines and stock market averages did not fluctuate hand-in-hand, enough indication was given to illustrate the similar movements of the two; thus, hypothesis number one was substantiated. Selected economic factors did seem to have an effect on hemline fluctuations, but these factors alone did not adequately account for observed movements. Other undefined factors, such as introduction of new fashion styles or psychological attitudes of the public, also could have affected hemline fluctuations.

Hypothesis number two stated: A study of hemline fluctuations of both the upper and middle classes from 1921 to 1971 will reveal a time lag between the two classes as affected by selected economic factors, and will indicate the reaction of the middle class to be slower to accept fashion hemline innovation than the upper class.

A time lag was evident for the last two decades studied, the fifties and sixties, but no measurable lag was revealed in the preceding decades. This action was contrary to the "trickle down" theory in which fashion innovation begins with the upper class and "trickles down" to the middle and lower classes of society. From 1921 to 1950 the women of the upper and middle classes wore similar hem lengths, following the fashion trends of the times and being in style. But in the years from 1950 to 1971, the women of the middle class were indeed slower to accept hemline innovation than those of the upper class.

As noted in Chapter I, several theories have been proposed to explain how fashion movements operate. The proposition that fashion diffuses horizontally within each social class rather than vertically from the upper to the lower levels could account for the inconsistency in the time lag. Perhaps the "trickle down" theory may no longer be a valid explanation for the spread of fashion between social classes.

Another possible explanation for the time lag revealed in the 1950's and 1960's may be the ascendancy of middle class standards and values. The striving of middle class members to reach the upper levels of their class could have been an indication of their desires to compete with those at their own class level rather than with the members of the upper class. Fashion would have been affected by this intra-class struggle. The reasons for the time lag could be debated solely on the basis of the findings; thus, hypothesis number two was only partially substantiated.

The research conducted on the hypothesis that hemlines rise and fall with the changes in the stock market has been somewhat generalized in the past in assuming that the two unrelated factors moved hand-in-hand. This study, being more detailed, focused more sharply on selected economic factors and the way stock market and hemline fluctuations occurred. The finding that hemlines and stock market averages do appear to fluctuate in a similar manner corroborates earlier reports.

As a result of looking at selected economic happenings of the United States from 1921 to 1971, an insight into fashion hemline innovation, as related to the national economy, was presented. Economic happenings were seen to be one of the influences affecting hemline fluctuations during the time period examined.

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APPENDIXES

APPENDIX A

THE DOW JONES RAIL STOCKS

The 20 rail stocks now used for Dow Jones Averages include the following companies:¹

American Air
Canadian Pacific
Consolidated Freight
Eastern Air Lines
Great Northern Railway
Louisville & Nashville
Norfolk & Western
Northwest Air
Pacific International Express
Pan American World Air
Penn Central
St. Louis - San Francisco
Santa Fe Industries
Seaboard Coast Line
Southern Pacific
Southern Railway
Transworld Air
United Air Lines, Inc.
Union Pacific Corp.
U.S. Freight Co.

¹Frank G. Zarb and Gabriel T. Kerekes (ed.), The Stock Market Handbook (Homewood, Illinois: Dow Jones-Irwin, Inc., 1970), p. 983.

THE DOW JONES INDUSTRIAL STOCKS

The 30 stocks used for the Industrial Average include:²

Allied Chemical
Aluminum Company of America
American Can
American Telephone and Telegraph
American Brands
Anaconda
Bethlehem Steel Corporation
Chrysler
DuPont
Eastman Kodak
General Electric
General Foods
General Motors
Goodyear
International Harvester
International Nickel
International Paper
Johns-Manville
Owens-Illinois Glass
Proctor and Gamble
Sears Roebuck
Standard Oil of California
Standard Oil of New Jersey
Swift and Company
Texaco
Union Carbide
United Aircraft
U.S. Steel
Westinghouse Electric
Woolworth

²Ibid.

THE DOW JONES UTILITY STOCKS

The 15 stocks used for the Utility Average include:³

American Electric Power
Cleveland Electric Illuminating
Columbia Gas System
Commonwealth Edison
Consolidated Edison
Consolidated Natural Gas
Detroit Edison
Houston Lighting and Power
Niagara Mohawk Power
Pacific Gas and Electric
Panhandle Eastern Pipeline
Peoples Gas
Philadelphia Electric
Public Service Electric and Gas
Southern California Edison

³Ibid.

APPENDIX B

TABLE II

MOST FULLY-TYPICAL SKIRT LENGTHS, 1921-1970 (EXPRESSED IN
PERCENTAGE RATIO OF DISTANCE OF SKIRT FROM FLOOR
TO TOTAL LENGTH OF FIGURE)

<u>Year</u>	<u>Vogue</u>	<u>Harper's Bazaar</u>	<u>Good Housekeeping</u>	<u>Ladies' Home Journal</u>
1921	17.0	17.8	16.8	16.5
1922	15.6	13.9	13.1	13.9
1923	12.8	12.9	12.8	10.8
1924	15.9	15.6	15.1	13.3
1925	21.3	24.5	20.2	25.3
1926	25.7	28.0	25.6	30.5
1927	29.7	29.2	29.6	34.5
1928	29.1	28.9	28.3	30.4
1929	26.4	30.7	28.2	29.0
1930	21.3	20.1	22.1	20.5
1931	17.6	18.7	21.4	18.3
1932	17.5	17.4	17.8	13.2
1933	15.0	13.8	16.1	16.6
1934	15.6	17.6	17.6	15.5
1935	16.2	18.6	16.7	15.9
1936	17.5	22.1	19.3	20.0
1937	20.0	20.3	22.7	21.1
1938	23.4	24.7	23.7	25.3
1939	27.1	26.5	26.8	27.9

TABLE II (continued)

<u>Year</u>	<u>Vogue</u>	<u>Harper's Bazaar</u>	<u>Good Housekeeping</u>	<u>Ladies' Home Journal</u>
1940	29.8	30.8	27.4	28.3
1941	28.1	27.9	30.3	28.4
1942	28.8	30.9	32.8	27.8
1943	28.8	28.0	29.1	29.1
1944	29.6	27.3	28.3	28.1
1945	27.0	25.6	27.1	29.4
1946	26.0	25.3	27.3	25.2
1947	21.0	20.8	23.1	18.6
1948	15.5	13.7	16.5	16.2
1949	17.8	18.6	17.5	17.2
1950	21.8	22.0	18.2	18.4
1951	21.2	21.5	19.4	19.2
1952	22.0	19.3	21.7	18.8
1953	19.5	20.1	19.1	19.8
1954	22.8	21.6	21.8	19.1
1955	21.2	21.1	21.3	19.4
1956	22.7	23.7	20.6	19.0
1957	20.9	23.8	20.7	21.2
1958	27.2	28.4	25.2	22.3
1959	28.4	31.7	26.9	24.4
1960	30.9	28.2	27.9	25.9
1961	28.6	31.8	30.9	28.1

TABLE II (continued)

<u>Year</u>	<u>Vogue</u>	<u>Harper's Bazaar</u>	<u>Good Housekeeping</u>	<u>Ladies' Home Journal</u>
1962	32.0	32.2	29.6	20.1
1963	32.8	32.8	30.6	29.6
1964	32.9	30.1	33.0	32.4
1965	35.4	28.9	29.4	32.8
1966	39.9	35.9	33.3	34.4
1967	43.7	39.5	39.1	36.6
1968	41.1	38.4	36.3	36.8
1969	43.1	41.5	41.3	34.6
1970	36.2	35.2	41.2	38.1

TABLE III

AVERAGES OF MOST FULLY-TYPICAL SKIRT LENGTHS, 1921-1970
 (EXPRESSED IN PERCENTAGE RATIO OF DISTANCE OF SKIRT
 FROM FLOOR TO TOTAL LENGTH OF FIGURE)

Year	<u>Vogue and Harper's Bazaar</u>	<u>Good Housekeeping and Ladies' Home Journal</u>
1921	17.4	16.7
1922	14.7	13.5
1923	12.8	11.8
1924	15.7	14.2
1925	22.9	22.7
1926	26.8	28.1
1927	29.4	32.1
1928	29.1	29.4
1929	28.6	28.6
1930	20.7	21.3
1931	18.2	19.9
1932	17.5	15.5
1933	14.4	16.4
1934	16.6	16.5
1935	17.4	16.3
1936	19.8	19.7
1937	20.0	21.9
1938	24.1	24.5
1939	26.8	27.4

TABLE III (continued)

Year	<u>Vogue and Harper's Bazaar</u>	<u>Good Housekeeping and Ladies' Home Journal</u>
1940	30.3	27.9
1941	28.0	29.4
1942	29.8	30.3
1943	28.4	29.1
1944	28.5	28.2
1945	26.3	28.3
1946	25.7	26.3
1947	20.9	20.8
1948	14.6	16.3
1949	18.2	17.4
1950	21.9	18.3
1951	21.4	19.3
1952	20.7	20.3
1953	19.8	19.5
1954	22.2	20.4
1955	21.1	20.3
1956	23.2	19.8
1957	22.3	21.0
1958	27.8	23.7
1959	30.3	25.7
1960	29.5	26.9
1961	30.2	27.5

TABLE III (continued)

Year	<u>Vogue and Harper's Bazaar</u>	<u>Good Housekeeping and Ladies' Home Journal</u>
1962	32.1	29.8
1963	32.8	30.1
1964	31.7	32.7
1965	32.2	31.1
1966	37.9	33.9
1967	41.6	37.9
1968	39.8	36.6
1969	42.3	38.0
1970	35.7	39.6

TABLE IV
DOW JONES INDUSTRIAL AVERAGES 1921-1970

Year	High	Low
1921	81.5	63.9
1922	103.4	78.6
1923	105.4	85.7
1924	120.5	88.3
1925	159.4	115.0
1926	166.6	135.2
1927	202.4	152.7
1928	300.0	191.2
1929	381.2	198.7
1930	294.1	157.7
1931	194.4	73.8
1932	88.8	41.2
1933	108.7	50.2
1934	110.7	85.5
1935	148.4	96.7
1936	185.0	143.1
1937	194.4	113.6
1938	158.4	99.0
1939	155.9	121.4
1940	152.8	111.8
1941	133.6	106.3

TABLE IV (continued)

Year	High	Low
1942	119.7	92.9
1943	145.8	119.6
1944	152.5	134.2
1945	195.8	151.4
1946	212.5	163.1
1947	186.9	163.2
1948	193.2	165.4
1949	200.5	161.6
1950	235.5	196.8
1951	276.4	239.0
1952	292.0	256.4
1953	293.8	255.5
1954	404.4	279.9
1955	488.4	388.2
1956	521.1	462.4
1957	520.8	419.8
1958	583.7	436.9
1959	679.4	574.5
1960	685.5	566.1
1961	734.9	610.3
1962	726.0	535.8
1963	767.2	646.8

TABLE IV (continued)

Year	High	Low
1964	891.7	766.1
1965	969.3	840.6
1966	995.2	744.3
1967	943.1	786.4
1968	985.2	825.1
1969	968.9	769.9
1970	842.0	631.2

APPENDIX C

TABLE V
CORRELATION COEFFICIENTS* OF HEMLINE MEASUREMENTS AND
STOCK MARKET AVERAGES 1921-1970

	Hemlines From Fashion Magazines				Stock Market	
	Upper Class		Middle Class		High	Low
	<u>Vogue</u>	<u>HB</u>	<u>GH</u>	<u>LHJ</u>		
<u>Vogue</u>	1.000	0.960	0.952	0.929	0.783	0.775
HB ^a		1.000	0.948	0.927	0.735	0.719
GH ^b			1.000	0.940	0.695	0.675
LHJ ^c				1.000	0.631	0.616
High					1.000	0.991
Low						1.000

^aHarper's Bazaar.

^bGood Housekeeping.

^cLadies' Home Journal.

*
+1.00 = perfect positive correlation.
.00 = no correlation.
-1.00 = perfect negative correlation.

TABLE VI
ANALYSIS OF CORRELATION COEFFICIENTS OF HEMLINE
MEASUREMENTS 1921-1970

Hemlines From Magazines By Social Class	Number of Pairs	DF ^a	r
Upper Class			
<u>Vogue</u>	50	49	0.78*
<u>Harper's Bazaar</u>	50	49	0.74*
Middle Class			
<u>Good Housekeeping</u>	50	49	0.70*
<u>Ladies' Home Journal</u>	50	49	0.63*

* Significant at .01 level.

^aDF = degrees of freedom.

$$\alpha_{dz} = \sqrt{\frac{1}{N_1-3} + \frac{1}{N_2-3}}$$

$$r = 0.78$$

$$z = 1.05$$

$$r = 0.70$$

$$z = 0.87$$

$$r = 0.74$$

$$z = 0.95$$

$$r = 0.63$$

$$z = 0.74$$

$$z =$$

$$z =$$

$$z = \sqrt{.043} = 0.207$$

$$z = \sqrt{.043} = 0.207$$

$$z = \frac{1.05 - 0.95}{0.207}$$

$$z = \frac{0.70 - 0.63}{0.207}$$

$$z = 0.483 \text{ (upper class)}$$

$$z = 0.337 \text{ (middle class)}$$

Figure 8. Computation of z differences.

VITA

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