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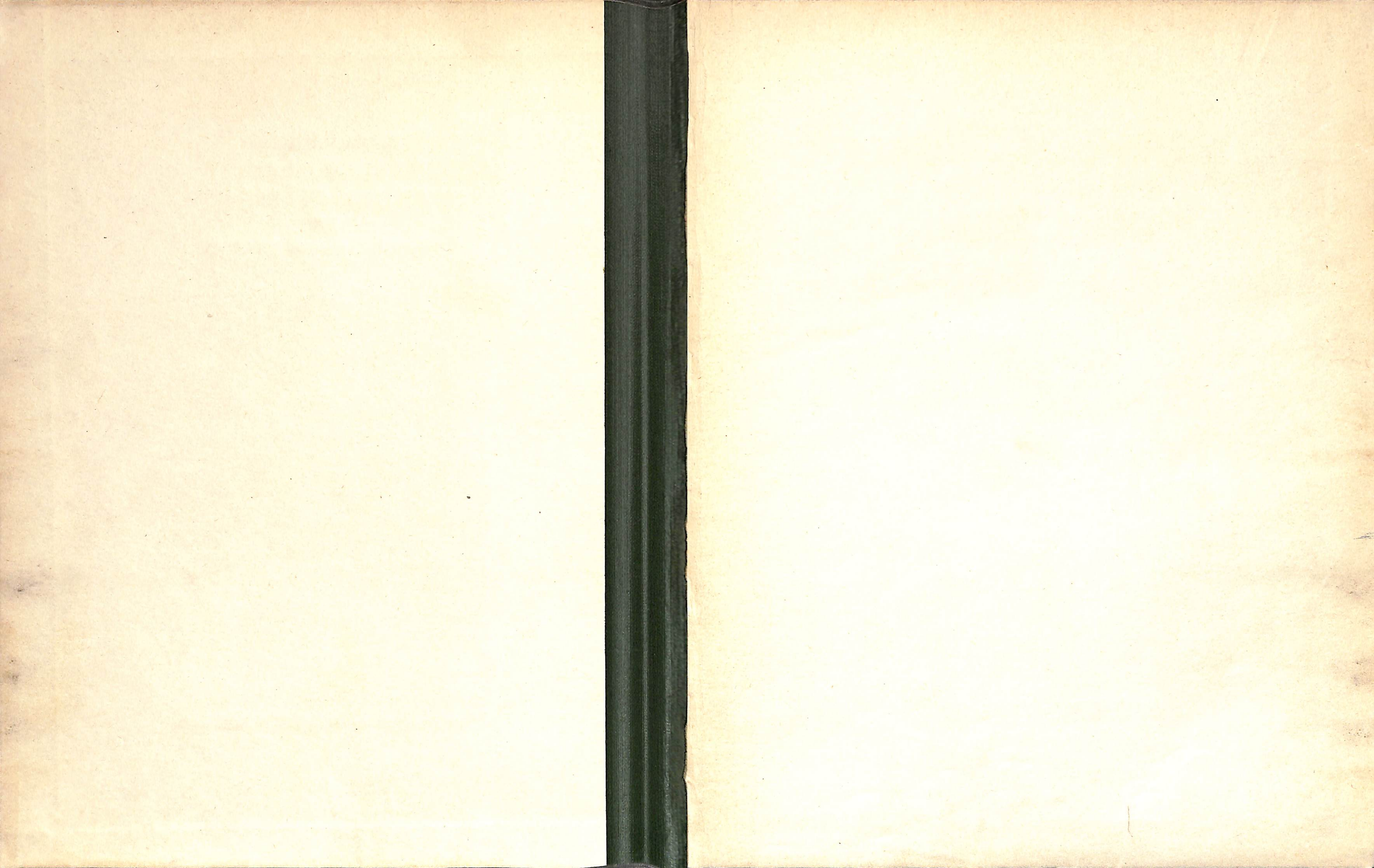
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ANALYSIS OF
COLOR TONES AS AN AID IN
CLOTHING SELECTION

BY
VIVIAN YVONNE BROOKS

TENNESSEE A. & I. STATE COLLEGE
1947



ABSTRACT

INDEPENDENT SYSTEM

The present study grew out of the observations of color
made by Negro women in several environments. The observations
reveal that the color tones are not uniform to the
best advantage to enhance personal attractiveness. These studies have
been experimentally conducted from the study of color which have
dealt with the wearing of colors. These studies have recognized
problems peculiar to Negro women and as a result such information
is being made available to the general public.

August 17, 1947

To the Committee on Graduate Study:

I am submitting to you a thesis written by Vivian Yvonne
Brooks entitled "Analysis of Color Tones as an Aid in Clothing
Selection." I recommend that it be accepted for nine quarter
hours credit in partial fulfillment of the requirements for the
degree of Master of Science, with a major in Home Economics.

Katherine B. Fort
Major Professor

We have read this thesis
and recommend its acceptance:

Frances E. Thompson

James B. Finney

Accepted for the Committee

George W. Bone Jr.
Dean of the Graduate School

ABSTRACT COPY

INTRODUCTORY STATEMENT

The present study grew out of the observations of colors worn by Negro women in several environments. The observations reveal that too many women are not using color in costume to the best advantage to enhance personal attractiveness. Negroes have been comparatively neglected from the many studies which have dealt with the wearing of colors. These studies have recognized problems peculiar to caucasian women and as a result much information is available to help and guide them in making becoming color selection. However, far too little attention and study has been given to the significant problems of women in the darker-skinned society which are created by the wide range of complexion tones in this group, thereby including the recognized problems of the fairer-skinned women.

STATEMENT OF PROBLEM

This particular study proposes to analyze varied complexion tones at Tennessee Agricultural and Industrial State College in an attempt to determine upon what basis appropriate colors relative to clothing might be selected by Negro women of varied complexion. Further, it is the purpose of this study to recommend principles which may govern the choice of color in clothing according to skin coloration, thereby cultivating better general taste among darker-skinned women.

The study attempts to answer the following questions:

1. What variations in complexion tones are found at Tennessee Agricultural and Industrial State College?
2. How may the principles of color be applied to successful costuming by individuals of these varied complexion tones?
3. What colors seem to be most becoming to certain types?
4. What are some of the specific color problems of students at Tennessee Agricultural and Industrial State College, and how may these be overcome?

LIMITATIONS

The findings must be considered in light of the following Limitations:

1. It was limited to a section of the female student population of Tennessee Agricultural and Industrial State College.
2. It was limited to varied skin tones.
3. Five general complexion types were used: (1) Light, (2) Light brown, (3) Medium brown, (4) Dark brown, and (5) Very dark brown.
4. Color harmony was presented from the principles of color as set forth by the Munsell and Prange systems of color.
5. It was limited to the selection of colors and color combinations for women's clothing.

METHODS OF PROCEDURE

Normative-survey method

Instruments of research used for collecting data:

1. Questionnaire
2. Correspondence
3. Conference
4. Complexion Analysis
5. Testing of color against complexion
6. Check sheet

SIGNIFICANT FINDINGS

1. Insufficient scientific study on the classification of Negro complexions by manufacturers of cosmetics for Negro use.
2. The tendency of many of students to reckon skin coloration lighter than it is.
3. Darkest types of Negro skin coloration not represented at Tennessee Agricultural and Industrial State College.
4. Color preferences of students better on the basis of emotional effects produced than in harmonizing with skin coloration.
5. Blue is the most preferred color of students used in the study.
6. Seventy-one per cent of students inconsistent in responses relating to how individual color choices are made and the factors considered as predominating bases for color selection.
7. Warm colors are predominately becoming to varied tones of brown complexions.
8. The effects of color on the complexion varies with the value and intensity of the color.
9. Deep colored dull lustered fabrics produce more pleasing effects on the complexions studied.
10. Individuals who have clear, smooth complexions may wear most colors becomingly provided that there is not too great a contrast between the value of the skin coloring and the colors selected.
11. High interest shown by students, faculty members, and others for information concerning the selection of harmonious, enhancing colors.

RECOMMENDATIONS

1. Charts and equipment used in study should be used in classrooms in connection with clothing and related color courses.
2. The Home Economics division should inaugurate a good-grooming clinic including a skin analysis, to be open to the student body at large.

3. A Fellowship fund should be created for further research of color in relation to Negro skin coloration.
4. Commercial companies should establish good-grooming clinics to be operated on a paying basis.
5. Commercial companies should invest in opportunities for research in the matter of color.
6. That Negro teachers learn to teach applied color in clothing according to standards adaptable to Negro complexions rather than by standards set up for peoples whose skins are fair which are found in most textbooks and other reference material.
7. That a commercial list of colors be worked out and standardized for use in the clothing classes so as to avoid confusion in the purchasing of colors.
8. That Home Economics instructors emphasize good grooming and personal appearance in all of their courses so as to thoroughly integrate applied art in Home Economics.
9. That further study of color in clothing be made based upon skin, hair, and eye coloration.
10. That a scientific experimental study be made on this subject in an uncontrolled and a controlled situation.
11. This information should be extended to clothing retailers for use in guiding Negro customers along the line of making becoming color choices in wearing apparel.
12. That applied color instruction relative to clothing should be begun in the primary grades and continued.
13. That all teachers should emphasize good grooming.

ANALYSIS OF COLOR TONES AS AN AID
IN CLOTHING SELECTION

A THESIS

Submitted to
The Committee on Graduate Study
of
Tennessee Agricultural and Industrial State College
in
Partial Fulfillment of the Requirements
for the degree of
Master of Science

by

Vivian Yvonne Brooks

August 1947

PREFACE

There is too little valid information at the disposal of teachers to use in teaching and guiding Negro students in the appreciation and application of color principles in the selection of clothing so that their feminine charm may be enhanced.

Because I have recognized the problem over a long period of time I am profoundly interested in this attempt to arouse interest and investigation in it. Though I make a limited study of it now, it is my purpose to continue the experiment with proper color combinations suitable for the various complexions observed during my prospective teaching career when I shall have large numbers of students continuously from whom I may gather data.

The study is based on the wearing of colors in relation to varying yellowish and brownish complexion tones ranging from light to very dark. It is by no means complete but it is my desire that the effort put forth here shall create a consciousness on the part of teachers and others to recognize and search for solution to this problem in the classrooms and laboratories and further, that it serve as incentive to others to continue color research and experiment on the problem.

I wish to express my gratitude and appreciation to those who have so willingly given of their time, their suggestions and information that this study might be possible.

I am indebted to my advisory committee, Dean G. W. Gore, Jr., Miss Frances E. Thompson, Mrs. Geraldine Fort and Mr James Finney for the

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long patient hours of supervision, guidance and encouragement they have given me.

Without the help of Dr. Ina C. Brown and Miss Mary L. Gentry this work would have been less satisfying to me. To them I offer gratitude.

My sincere thanks are extended to the many students who cooperated with me so enthusiastically in making the measurements and notations used.

I am grateful to my mother for her moral support and keen criticism, and to faculty members and friends who have encouraged me.

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CHAPTER I

INTRODUCTION

Color selection in dress is a science deserving patient and continued study. The teaching of art as related to Home Economics was introduced in 1917,¹ as an essential part of the program; nevertheless, the relation of art to everyday living has dated from the time when man first began to wear clothing.

To-day many people who would achieve beauty fail to do so by the combinations of colors selected because of a lack of art knowledge which is fundamental to the satisfactory solution of the problem.

The clothes, that one wears, proclaim knowledge or ignorance of the laws of color harmony, for clothes cannot be separated from color. A necessary part of everyday living is the selecting, buying and wearing of clothes. The many things from which there are to choose to-day increase the problems relating to the wearing of color. Every time two or more fabrics are put together for wearing purposes, the problem of color and design arises, yet little harmony can be achieved unless such combinations are in accord with the principles of color.

Complexion is probably most important to be considered in selecting colors to be worn; yet other factors such as color of the hair and eyes, size and form of the individual, also personality must be taken into account. The coloring of the skin is of primary importance because

¹ Adelaide S. Baylor, Vocational Education in Home Economics, Federal Board for Vocational Education Bulletin No. 151.

it covers a larger area and is, therefore, more conspicuous. The hair and eyes are usually of secondary importance except when the coloring of these features are particularly outstanding and it is desirable to emphasize them above other features. Even then, care should be taken not to use colors unbecoming to the skin.

The importance of harmonizing colors with complexion as a means of enhancing personal beauty has been increasingly recognized, for the fairer-skinned people, in recent years. Charts and information, for guiding persons of different complexion types to select becoming colors for clothing, are now included in many of the textbooks used in teaching clothing and related art. A wealth of material, relating to the wearing of colors, is also being distributed as teaching aids and for use by the general public by manufacturers of commercial products.

As pronounced and as varied as Negro complexions are, it is interesting to note that so little attention has been given to study which would help them to wear colors more effectively. Not only is pigmentation the most markedly dissimilar trait when Negroes and Whites are compared as to physical characteristics,² but the range of variations within the group is so extensive--ranging from almost ebony black to the fairest white skin, as to create a highly significant problem.

The question of why any race of mankind, so rich in natural coloring, has been comparatively neglected from studies dealing with the application of color to clothing is understood by recognizing the factors

²Melville J. Herskovits, The Anthropometry of the American Negro, p. 241.

in a dark complexioned society in which the individuals differ from the predominating group in physical type, particularly in such an easily recognized trait as skin color. Standards for Negro beauty and dress have been created according to the standards of the predominating culture in which they find themselves. As a result little or no attention has been given to the characteristic variations of the Negro which demand deviation from those standards. Negro women, in an attempt to abide by principles of color for dress as created for caucasian complexion types, have often misused color in an attempt to imitate what is being worn by blondes, brunettes and titians--the most recognized types of complexions in the White race. Consequently, there is a need for study concerning this problem of the darker-skinned society.

Statement of Problem

The investigation, described in the following chapters, arose from the observations of colors worn by dark complexioned women in several environments. This particular study proposes to analyze varied complexion tones at Tennessee Agricultural and Industrial State College in an attempt to determine upon what basis appropriate colors relative to clothing should be selected by Negro women of varied complexions. Further, it is the purpose of the study to recommend principles which may govern the choice of color in clothing according to skin coloration, thereby cultivating better general taste among darker-skinned women. It was undertaken because it is believed, as a result of observations, that there is a need among students for information on how to choose colors

and harmonize them so as to enhance complexion and personality. It was assumed that the wide range of complexion variations among the Negro people is significant enough to warrant a different set of principles in choosing colors other than those adhered to by caucasian people.

The present study attempts to answer such questions as:

1. What variations in complexion tones are found at Tennessee Agricultural and Industrial State College?
2. How may the principles of color be applied to successful costuming by individuals of these varied complexion tones?
3. What colors seem to be most becoming to each complexion type?
4. What are some of the specific color problems of Tennessee Agricultural and Industrial State College students and how may these be overcome?

The problem has been explored on the basis of the following statements:

1. Colors for clothing can be chosen effectively upon the basis of the individual's skin coloration and other personal characteristics such as: hair and eye coloring, size, age and personality.
2. Better general taste in the selection of clothing can be cultivated by Negro women if they are made aware of the importance of the amount of

pigmentation in their skins.

- a. The draping of colors of different hues on persons of different complexion types should reveal definite findings.
- b. A few principles for selecting becoming colors should be intelligently evolved from these findings.

Limitations of Study

The study has necessarily been limited in scope hence the findings must be considered in light of the following limitations:

1. It was limited to a section of the female student population at Tennessee Agricultural and Industrial State College.
2. It was limited to varied skin tones.
3. Five general complexion types were used: (1) light, (2) light brown, (3) medium brown, (4) dark brown, and (5) very dark brown.
4. Color harmony was presented from the principles of color as set forth by the Munsell and Prang systems of color.
5. It was limited to the selection of colors and color combinations for women's clothing.

Review of Related Studies

Many studies have been made in recent years on the selection of color in clothing for different complexion types. Consequently, such information resulting from these studies is available to teachers as teaching material and to other persons for personal use. A review of literature related to this study has revealed that almost all of the studies previously made have been based on different types of caucasian skins.

In a book designed for general use, Hempstead³ presents information on the relating of colors worn to skin coloration. Persons are grouped as having cool or warm coloring according to the actual hue of their skin. Individuals are classified as blonde, brunette, red-head, and intermediate types. Attention is also given to those women whose hair has lost its original coloring and has turned white or gray and whose skin has undergone changes which need consideration.

Donovan,⁴ in a textbook designed for use in secondary schools, discusses the appropriateness of colors for individual types. Complexions are described as pale, average, and vivid and are classified as blonde, brunette, auburn and intermediate types.

More information of a similar nature is given by Gillum⁵

³ Laura Hempstead, Color in Line and Dress, pp. 51-52.

⁴ Dulcie Donovan, Color and Design, pp. 71-77.

⁵ Lula Gillum, Color and Design, Chapter II.

Dooley⁶ and Baldt⁷ in textbooks designed for secondary school use. This wealth of material has not only been given in textbooks and other books for general use, but as has been mentioned manufacturers of clothing, fabrics, dyes, cosmetics and other related products, distribute this material in the form of pamphlets, leaflets and charts for use in guiding color choices according to individual complexion types.

The Fashion Bureau of Rit Products Corporation⁸ has distributed material which includes some principles of color selection for varied complexion types. Color selection charts are included in the material for the purpose of guiding individuals of different complexion types to make more becoming color selections. The types, in which this information is concerned, are blonde, brownette, red-head and brunette.

The Home Economics Division of the Printz-Biederman Company,⁹ makers of Printzess coats and suits, has made material of a similar nature available to teachers. A color selection chart, with a range of becoming colors for each of the following complexion types--brunette, brownette, blonde and titian--is included in the material.

The American Viscose Corporation¹⁰ distributes a leaflet, in connection with information on rayon, which gives basic color rules for

⁶William Dooley, Clothing and Style, Chapter III.

⁷Laura Baldt, Clothing for Women, pp. 70-75.

⁸Dressmaking with Color, Leaflet 2730. Fashion Bureau. (Chicago: The R. and Products Corporation, 1946)

⁹Short Course: Clothes Selection, Home Economics Division. (Cleveland: The Printz-Biederman Company, Litho)

¹⁰Color in Your Wardrobe, Leaflet 141. (New York: American Viscose Corporation, 1946. Litho)

choosing colors. Suggestions for the wearing of colors are given for the creamy to sallow complexions, and for the rosy or ruddy complexions.

Because this material has been planned for use of the fair-skinned people, comparison of which is very small among Negro women, it is of little real service to them. Yet, it is used in Negro as well as in White schools in the teaching of applied color.

Spears¹¹ gives support to this in a volume published in 1937. The book was published as the result of a study in which experiments were made with what seemed to be proper color combinations for dark skins. It is designed as a supplementary text for high school and college courses. It is mentioned that even though some of the leading universities are open to all groups, no courses or other instruction have been provided which give specific information regarding the wearing of colors in relation to different types of dark skins. In this publication, three general classes of Negro are discussed. Lists of colors thought to be becoming to individuals of each of these classes are given.

Notwithstanding the recognition of this problem by Spears, it is thought that the material presented is too general in scope and therefore insufficient to meet the needs of the students.

¹¹ Charleszine Spears, How to Wear Colors, Chapter II.

Organization of Study

The findings in the present investigation present a picture of the problem of wearing colors as it now exists on the campus of Tennessee Agricultural and Industrial State College and introduces principles, the application of which may aid in the wearing of more effective color. Chapter I is devoted to the introduction to the study. Chapter II deals with the procedure followed in carrying out the investigation. In Chapter III, the data are analyzed. The findings are presented by means of graphs, tables and lists. Chapter IV is a discussion of the findings as they relate to the problems of students and other individuals of varied Negro complexions. Chapter V relates a general summary and conclusions. It also includes recommendations for the use of the findings.

The appendix includes a glossary of terms used in the study, samples of the questionnaire, a check sheet, charts, and illustrations relating to the study.

Requests for this information were sent to the following

Professors:

2202 Products Company

Black and White Cosmetic Corporation

Overton-Hygiene Company

Scott White Products Company

Haines C. J. Walker Manufacturing Company

CHAPTER II

A TECHNIQUE FOR INVESTIGATING COMPLEXION

TONES AND THEIR VARIATIONS

In the present study the attempt was made to establish norms for determining the typical situation as regard colors which seem to be most becoming to persons of varying dark complexion tones. The study is of an experimental nature yet several factors prevented the study from adhering to all criteria of the experimental method.

Correspondence, conference, questionnaire, analysis and experimentation were used as bases for collecting data.

The investigation was begun by sending letters to outstanding Negro cosmetic manufacturers in an effort to locate information regarding scientific study on the classification of complexion types. It was thought that this information would be of value in selecting the general types on which to base the study since these companies specialize in producing cosmetics to blend with different Negro types of brown complexions.

Requests for this information were sent to the following companies:

Apex Products Company

Black and White Cosmetic Corporation

Overton-Hygiene Company

Snow White Products Company

Madame C. J. Walker Manufacturing Company

Replies were received from the Black and White Cosmetic Corporation, the Snow White Products Company and the Madame C. J. Walker Manufacturing Company. No scientific information was given in these three replies, however, the complexion types used by two of the companies for advertising purposes were given.

Correspondence was also used as a means of arranging a conference with the Professor of Social Anthropology at one of the leading institutions of higher learning in Nashville. This conference gave many helpful suggestions and sources of references. It also led to correspondence with Doctor Melville Herskovits, Professor of Physical Anthropology at Northwestern University, to seek information concerning a workable device for measuring skin pigmentation. The desired information was received and this device, known as the Bradley Color Top, was ordered from the Milton Bradley Company for use in the investigation. It is described in detail later in the discussion.

An information sheet was constructed in order to obtain information concerning the students' knowledge or appreciation for selecting appropriate colors to wear. It was also constructed as a means of obtaining some of the individual color problems recognized by students in selecting wearing apparel. This sheet provided for a self-color evaluation by the student, the checking of the types of fabrics most commonly worn by the student, and the checking of color hues believed to be most becoming and those avoided by the student.

The sheet was devised as one means of supporting the

assumption that there is a need for the type of information sought in this investigation. Observation of students enrolled in the Art and Home Economics courses at the institution indicated that a wide variation of complexion tones was evident. Therefore, two hundred questionnaires were distributed among students enrolled in these courses. The one hundred and forty-two returns indicated that there were representatives in the group of each type chosen to be used in the study. Therefore, it is believed that the returns represent the range of complexion variations at Tennessee Agricultural and Industrial State College. This particular study is interested not in numbers, percentage of the entire school population or in representatives from each division at the institution, but is interested specifically in variations of complexion tones which may be categorized under the five general types used in this study.

In addition to the task of obtaining certain information from the student, there was that task of devising a check-sheet to record data from the complexion analyses and to record data from the tests of fabric hues used to harmonize colors with complexion.

In the process of analyzing complexions, the general complexion type, the amount of pigmentation present, composite skin tones of each individual, and skin texture were considered. In the process of testing fabric hues against skin coloration, hues of different values and intensities as found in fabrics were considered in relation to the complexion of each individual being tested. Eighteen basic hues

and three neutral colors were listed on a color analysis sheet.¹

There were columns on the sheet for checking the color values, light, medium or dark, and the intensity of the color as high, middle or low.

As an additional phase of the study, students in four of the largest art classes were arranged according to complexion variations, into columns representing the five general complexion types which are being used. Skin coloration of the students was compared and the students were shifted until each was placed in the column representing the type to which she belonged.

From each of these groups the lightest and darkest pigmentation represented was chosen. The amount of pigmentation in the skins of each was approximated by means of the Bradley Color Top.² This measurement revealed degrees of subtle tone variations within each group. It would have been a difficult task to classify each complexion variation separately for this study, therefore, the attempt was made to classify all variations into five general types.

The color top is a small top with a wooden spindle, a cardboard measuring disk for noting proportions of colors used, and a series of disks of colored paper. Each disk is a circle with a hole in the center so that it can be placed upon the spindle of the top. A slit extending from the center to the circumference was cut into each disk. This enables the four disks used in the study to be slipped together

¹See Appendix.

²Available from the Milton Bradley Company of Georgia, Inc., Atlanta, Georgia. See Appendix.

so that they can be adjusted in the proper proportions for matching the skin hue. When the top is spun, the colors appear to be mixed in a single tone. Black, white, yellow, and red disks were used in matching skin coloration. By employing these four colors any skin color can be very closely approximated if not exactly matched. The disks used with the top are standardized after the standard hues used in the several color systems.

The color top is a toy-like device and was created to teach children the principles of color mixture. It was first used by Charles B. Davenport in measuring pigmentation and was later developed by T. Wingate Todd and Leona van Gorder in their study of the skin color of Negro-White crosses. Herskovits also used the top for measuring pigmentation of his subjects in the study of American Negro hybrids.³

In these studies, care was taken to have only a small portion of the upper arm visible to the observer where the skin was to be matched. The spinning of the top was done by one person at a constant initial speed and the observation was made at the instant when the top was spinning at its greatest rate of speed. The percentage of each hue on the disk used to match the complexion was measured and recorded.

A slight deviation from the method of measuring as recorded by Herskovits was made in this study. The attempt was made to approximately match the facial coloration of the individual by glancing from the spinning top, as it was spinning at its greatest rate of speed,

³Melville Herskovits, op. cit.

to the face of the individual. This was done because facial coloration is considered of prime importance in this study.

Five students from each complexion type were secured for the testing. A complexion analysis was given to each individual selected. The amount of pigmentation in the skin was measured during this process. The percentage of each color on the disk was recorded and the individual was placed in one of the general complexion types. Other information from the analysis included a description of the complexion, the color of the hair, and the color of the eyes.

Pieces of colored cloth large enough to drape around the shoulders of an individual were secured in three varied hues, values, and intensities. Some of the cloth was purchased in commercial hues; other material was dyed to variations necessary, in certain hues, to become more harmonious with complexions tested. Six (as nearly as possible) standard colors produced by the Tintex Division of the Park and Tilford laboratories were used. These were purple, orange, 38 cardinal red, 6 royal blue, 5 brilliant yellow, and 36 dark green.⁴ From these six colors intermediate colors of varying tones were produced. Colors used for testing are shown on the color wheel in Appendix B.

The person being tested sat before a large mirror in a good

⁴Numbers indicate specific color tones as produced by Park and Tilford Laboratories.

light (daylight coming in from northeast windows). Each piece of cloth was draped about the individual's shoulders in order to get the best effect of the color on the face. Testing was done only for short periods of time as the eyes became tired and color responses became confused. The effect of the colors on the individual being tested was recorded as becoming, wearable⁵ or unbecoming.

Before making the color readings the attempt was made to set up a satisfactory criterion by which to critically analyze colors in relation to individual complexions. The criterion is supported by the theory of color as set forth by Albert Munsell⁶ and the Frang Publishing Company⁷ which is used in private and public schools throughout the country. The evaluation was made on the basis of the following criterion:

1. That the color does not make a dark skin appear darker.
2. That the color does not increase sallowness or any of the poor points of one's complexion.
3. That the color accentuates one's best features or minimizes the conspicuously poor ones.
4. That the color seems to bring out a natural healthy looking appearance in the skin.

⁵ See Page 28.

⁶ Albert H. Munsell, A Color Notation.

⁷ Bonnie E. Snow and Hugo B. Froehlich, The Theory and Practice of Color, The Frang Publishers, 1920.

5. That the color harmonizes with the skin coloring in accordance with the principles of color.

PERSONAL BASES FOR CHOICE OF COLOR

This chapter presents data which were collected through the procedures discussed in the previous chapter. Information pertinent to the investigation is presented by means of lists, figures, tables, and charts.

The manner in which students evaluated personal skin coloration was studied to determine whether or not they were capable of classifying themselves into the appropriate complexion types. Figure 1 shows how students classified themselves according to the five types used in the study.

Classification of Complexion Types

Of the one hundred and forty-two students whose questionnaires were studied, forty-seven per cent classified themselves as medium complexion, while approximately one per cent-two persons only classified themselves as very dark brown. Other classifications ranged in the order given: dark brown, twenty-five per cent; light brown, fifteen per cent; and light, twelve per cent.

The actual pigmentation of twenty-five students used as subjects in the experimental phase of the study was measured by means of the Munsell Color Test. Figure 2 indicates the variations of the four elements, black, yellow, red and white, used in matching complexion.

CHAPTER III

PERSONAL BASES FOR CHOICE OF COLOR

This chapter presents data which were collected through the procedures discussed in the previous chapter. Information pertinent to the investigation is presented by means of lists, figures, tables, and charts.

The manner in which students evaluated personal skin coloration was studied to determine whether or not they were capable of classifying themselves into the appropriate complexion types. Figure 1 shows how students classified themselves according to the five types used in the study.

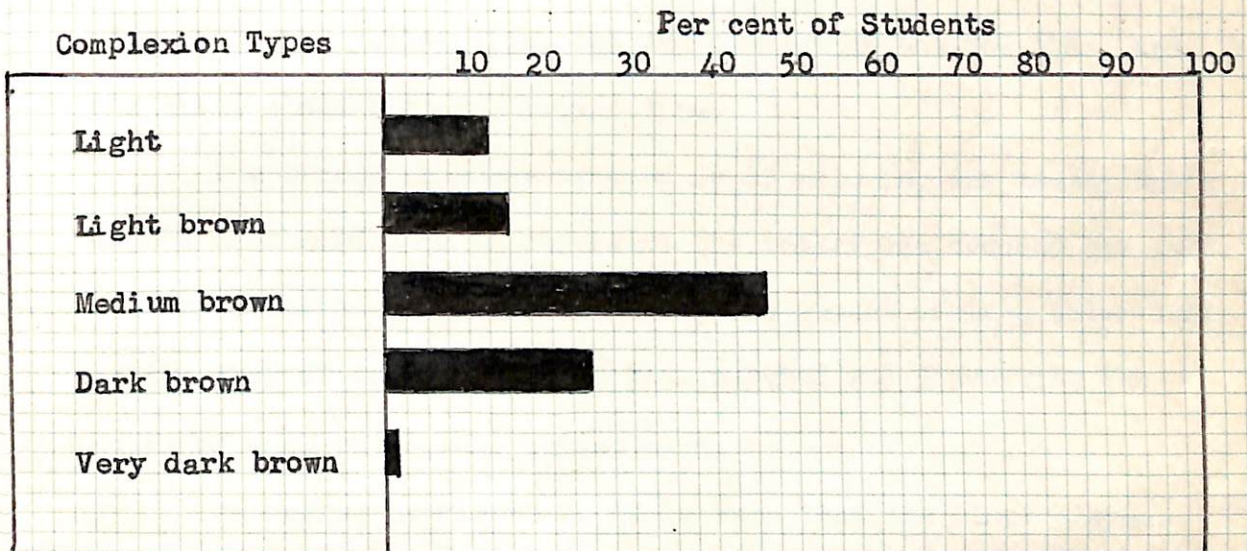
Classification of Complexion Types

Of the one hundred and forty-two students whose questionnaires were studied, forty-seven per cent classified themselves as medium brown, while approximately one per cent--two persons only--classified themselves as very dark brown. Other classifications ranged in the order given: dark brown, twenty-five per cent; light brown, fifteen per cent; and light, twelve per cent.

The actual pigmentation of twenty-five students used as subjects in the experimental phase of the study was measured by means of the Bradley Color Top. Figure 2 indicates the variations of the four elements, black, yellow, red and white, used in matching complexions

Figure 1

Percentage distribution of 142 students
according to five complexion types



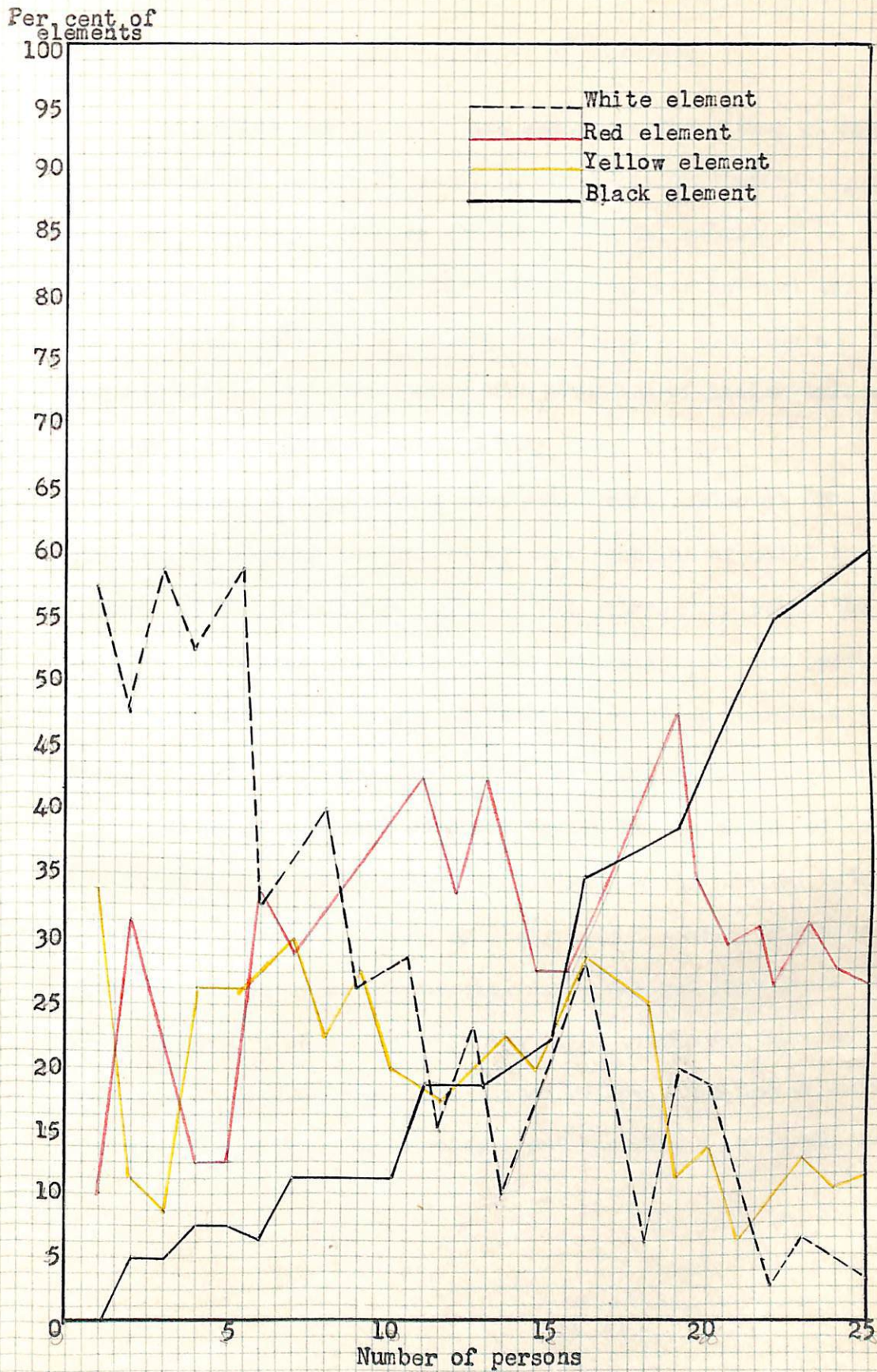
by this method.

The vertical lines of this figure indicate the percentage of each of the elements measured. The horizontal lines represent the number of subjects measured. Because five persons from each of the types referred to in the study were measured, the results are recorded by groups, beginning with the lightest person measured and reading to the darkest. The elements are indicated by different colored lines; the black element by the black line, the yellow element by the yellow line, the red element by the red line, and the white element by the broken line.

The percentages were arrived at by allowing the twenty units on the cardboard disk to represent the total--one hundred per cent. The computations were made by noting the amount of each color left on the disk after the skin had been matched and converting the units of each color into percentages.

According to Figure 2, it is seen that the black element increases almost constantly with each group measured ranging from the lightest to the darkest while the white element decreases from the lightest to the darkest. As indicated, the lightest skin measured constitutes none of the black element while the darkest skin measured is indicated as having been composed of fifty-nine per cent of the black element. Similarly, the white element of the lightest skin measured indicates fifty-six per cent decreasing to three per cent for the darkest skin measured.

Percentage distribution of four elements
of 25 students measured by the Bradley Color Top



Color Choices of Students

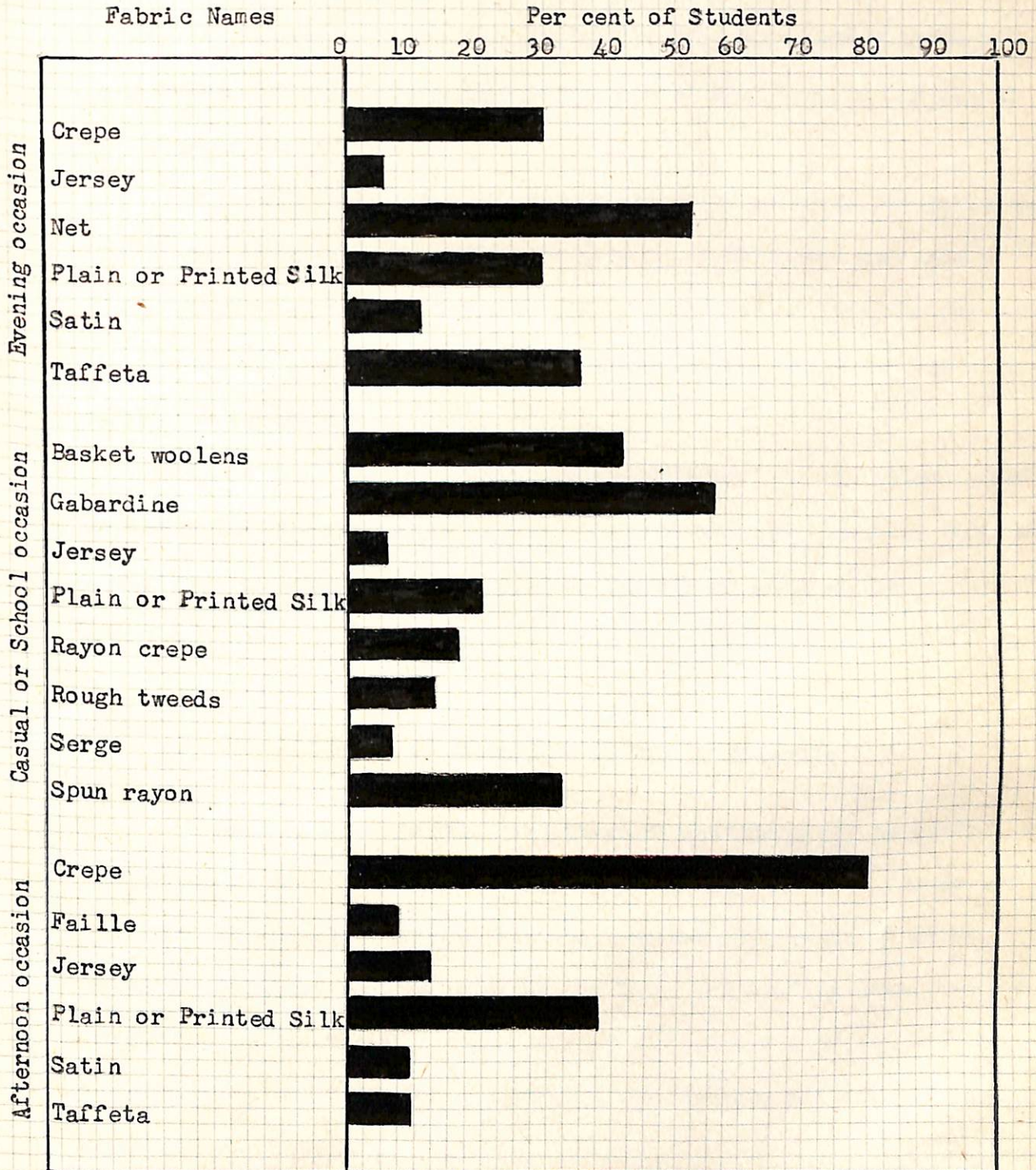
Attention was given in the study, to the matter of how students select colors to wear, as regard color preference, color dislikes, choice of fabrics and bases for the selection of colors. In analyzing the data from the responses of one hundred and forty-two students, relating to colors considered as becoming and those avoided (Table I) it was found that opinions of individuals varied to include a wide range of commercially named colors.

Table I analyzes this data which were collected from the students by showing the percentage distribution of color choices made in each of the complexion groups. The colors from which the students made their choices are listed. The percentages of the persons within each group who chose colors as becoming or those avoided are given opposite each color name and under the appropriate column captions.

Although personal opinions varied in the choice of colors, the overall picture indicates that blue and the neutral colors were thought to be most becoming by the greatest number of students in each complexion type. Commercial names for red were listed by the greatest number of students in the light complexion type as being avoided; the light brown type listed yellows; the medium brown, violets; the dark brown, yellows; and the very dark brown, violets.

Figure 3

Percentage distribution of fabrics
most commonly worn for three occasions
by 142 students



The Choice of Fabrics Among Students

For a study of this nature--concerning the wearing of colors-- it seemed advisable to analyze the choice of fabrics among students. This seemed important considering the effect that texture and finish of material has on color.¹

Figure 3 shows how fabrics are chosen by students for different occasions. Net is indicated as being worn by fifty-two per cent of those responding for evening occasions; gabardine, fifty-four per cent for casual or school occasions; and crepe, seventy-nine per cent for afternoon occasions.

It is not indicated what factors entered into the selection of fabrics; whether knowledge of the effect of color on texture, emotional responses, or other factors, such as fashion or economy, influenced the choices.

Bases of Selecting Colors by Students

Figure 4 presents the percentage distribution of one hundred and forty-two students using six bases for selecting colors. Twenty-two per cent represents the students who consider skin color in making color selections, as indicated by the first bar reading down from top to bottom on the figure. The fifth bar from the top of the figure, reading from top to bottom, indicates that seventy per cent of the

¹Harriet and Vetta Goldstien, Art in Everyday Life, pp. 184-191.

Figure 4

Percentage distribution of 142 students
using six bases for selecting colors

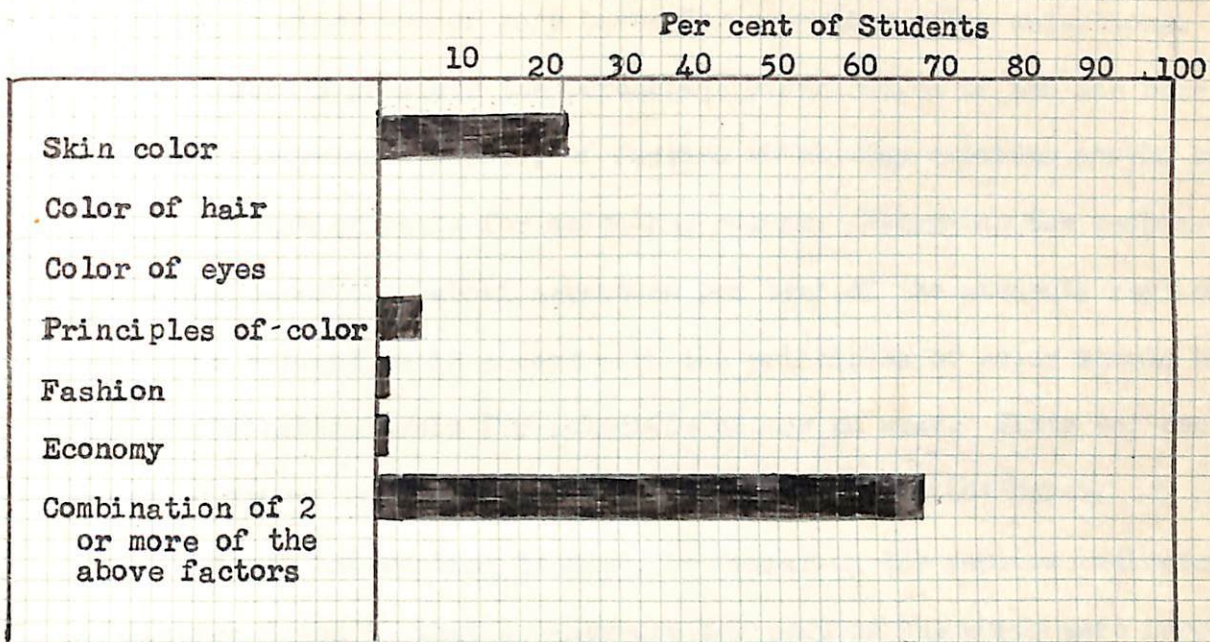
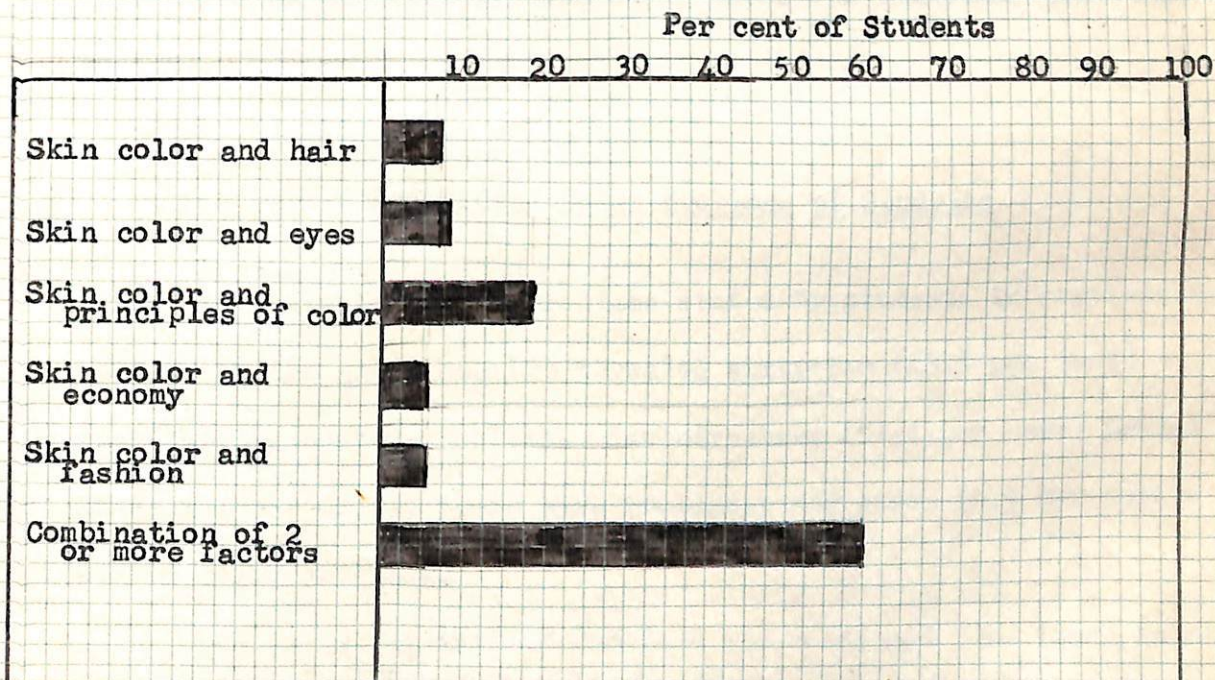


Figure 5

Percentage distribution of 142 students
of factors considered to be predominating basis
for selecting colors



students consider two or more bases for governing color selections.

Figure 5 presents the percentage distribution of the one hundred and forty-two students, of factors which they consider should be the predominating basis for selecting colors. Regarding the responses, it is indicated that about seventeen per cent of the students replied that skin coloration in accord with the principles of color should be the predominating basis for selecting colors to wear. Sixty per cent regarded two or more of the factors to be predominating bases.

It was interesting to note, in comparing the replies indicated on figures 3 and 4, that seventy-one per cent of the group were inconsistent concerning the two items. Although the remaining twenty-nine per cent were consistent in the replies given, many revealed a lack of knowledge by the student in recognizing which of the factors should be considered as the most predominating basis for selecting color in costume.

Individual Color Problems of Students

An analysis of the problems stated by students in supplementary remarks on the questionnaire revealed sixty-two (43.6 per cent) specifically stated problems. Seventy-three (51.4 per cent) failed to state whether or not there were problems; and seven (4.9 per cent) denied color problems.

The following list of problems was condensed from those submitted by the students.

1. Selecting colors that do not tend to give a dingy, dirty, or dull appearance to complexion.
2. Selecting colors that harmonize with hair and skin.
3. Selecting colors which do not absorb natural skin coloration.
4. Selecting colors which harmonize with skin coloration and minimize size.
5. Lacking knowledge concerning harmony and combination of colors.
6. Selecting colors which tend to subdue or subordinate negative personality.
7. Selecting colors to avoid ill or sallow appearance.
8. Selecting colors which harmonize with reddish hair and brownish complexion.
9. Selecting colors to brighten sleepy looking eyes.
10. Selecting brighter colors for a dark complexion.
11. Selecting colors which will overshadow oily, blemished or roughened skin.
12. Selecting colors economically.
13. Selecting colors that do not bring out blue tone in the skin.
14. Selecting shades for hosiery to harmonize with skin coloration and costume.
15. Selecting colors that do not make the skin appear darker.

16. Selecting colors that enhance personal appearance when worn near the face.
17. Selecting colors that will not emphasize or reflect in an oily skin.
18. Lacking knowledge in the ability to apply color effectively to costume.
19. Lacking knowledge of what colors to avoid.
20. Harmonizing accessories with costumes.
21. Selecting colors that harmonize with hair and skin coloration and are appropriate for size.
22. Selecting colors that do not reflect or create displeasing tones in the face.
23. Selecting colors that do not produce lines or shadows in the face.

The Effects of Colors on Various Types of Complexions

After the color readings of each of the students tested were recorded, it was found that certain colors in fabrics were more frequently becoming than others in each of the complexion groups. The effect that each color had upon the skin was rated as becoming, wearable or unbecoming. Becoming colors were regarded as those most becoming to the complexion; in other words, the complexion coloring seems to be improved by these colors. Those colors that may be worn but do not enhance the appearance were rated as wearable. These

TABLE I

PERCENTAGE DISTRIBUTION OF COLOR CHOICES MADE
BY VARYING TYPES OF STUDENTS

Commercial Color Names	Light 17*		Light Brown 21*		Medium Brown 67*		Dark Brown 35*		Very Dark Brown 2*	
	Preferred	Avoided	Preferred	Avoided	Preferred	Avoided	Preferred	Avoided	Preferred	Avoided
Yellow										
lemon	23	12	--	43	7	23	6	48	--	50
gold	--	18	5	10	18	3	6	6	50	--
beige	18	12	29	10	23	4	33	3	--	--
tan	12	18	14	5	13	13	15	3	--	--
Total	53	59	48	68	61	43	60	60	50	50
Yellow-green										
chartreuse	18	6	19	5	18	4	12	3	50	--
bottle green	0	12	5	5	4	3	0	0	--	--
spring green	24	0	10	0	10	3	12	9	--	--
moss green	0	0	0	5	0	0	12	0	--	--
Total	42	18	34	15	32	10	36	12	50	--
Green										
evergreen	6	--	10	5	6	6	15	3	--	--
hunter's green	6	--	19	5	7	4	3	6	--	50
olive	18	12	10	10	15	6	9	6	--	--
emerald	12	--	14	--	10	1	--	3	--	--
Total	42	12	53	20	38	17	27	18	--	50
Blue-green										
peacock	12	--	--	--	7	--	6	--	--	--
teal	18	--	5	--	15	1	6	3	--	--
turquoise	18	--	5	--	12	1	6	--	--	--
aqua	24	--	33	--	22	1	30	3	--	--
Total	72	--	43	--	56	4	48	6	--	--
Blue										
baby blue	29	--	10	--	18	3	27	--	--	--
sky blue	29	6	14	--	19	--	21	3	--	--
copenhagen	12	0	19	--	9	1	0	3	--	--
navy	24	6	24	--	31	--	36	3	--	--
Total	94	12	67	--	77	4	84	9	--	--

*Number of the 142 students in each category

TABLE I (CONT'D)

PERCENTAGE DISTRIBUTION OF COLOR CHOICES MADE
BY VARYING TYPES OF STUDENTS

Commercial Color Names	Light 17*		Light Brown 21*		Medium Brown 67*		Dark Brown 35*		Very Dark Brown 2*	
	Preferred	Avoided	Preferred	Avoided	Preferred	Avoided	Preferred	Avoided	Preferred	Avoided
Blue-violet										
iris	6	12	5	5	7	1	9	6	--	--
lilac	18	--	5	5	12	1	15	3	--	--
wisteria	6	--	5	5	3	1	3	3	--	--
corn flower	--	--	--	5	1	--	--	--	--	--
Total	30	12	15	20	23	3	27	12	--	--
Violet										
orchid	24	--	14	5	18	1	18	6	--	--
purple	12	18	--	24	4	43	3	30	--	100
lavender	29	--	10	5	15	5	6	21	--	--
Total	65	18	24	34	37	49	27	57	--	100
Red-violet										
amethyst	--	--	5	--	3	--	--	--	--	--
fuchsia	41	6	24	5	24	3	21	6	50	--
egg plant	0	12	5	14	3	4	--	3	--	--
raspberry	6	--	--	14	7	3	6	6	100	--
Total	47	17	34	33	37	10	27	15	150	--
Red										
old rose	18	12	10	5	7	1	9	--	--	--
pink	35	6	29	--	33	1	36	3	--	--
scarlet	6	29	5	19	7	16	6	21	50	50
maroon	18	--	5	14	10	6	12	--	--	--
Total	77	47	49	38	47	24	53	24	50	50
Red-orange										
tangerine	12	--	--	10	9	9	3	6	50	--
salmon	6	--	5	--	15	6	9	6	--	--
coral	18	6	5	--	6	7	18	--	--	50
paprika	--	--	5	--	6	7	3	6	--	--
Total	36	6	15	10	36	29	33	18	50	50

*Number of the 142 students in each category

TABLE I (CONT'D)

PERCENTAGE DISTRIBUTION OF COLOR CHOICES MADE
BY VARYING TYPES OF STUDENTS

Commercial Color Names	Light 17*		Light Brown 21*		Medium Brown 67*		Dark Brown 35*		Very Dark Brown 2*	
	Preferred	Avoided	Preferred	Avoided	Preferred	Avoided	Preferred	Avoided	Preferred	Avoided
Orange										
burnt orange	6	--	5	10	3	6	6	6	50	--
terra cotta	--	--	--	--	1	2	3	--	--	--
brown	12	18	14	5	21	6	27	--	--	--
orange	6	12	5	19	6	30	--	30	--	--
Total	24	30	24	34	31	44	36	36	50	--
Yellow-orange										
pop corn	6	--	5	5	6	3	3	3	--	--
cork	--	3	5	--	1	--	3	--	--	--
champagne	6	--	5	--	10	--	3	--	--	--
honey	12	--	5	--	9	--	6	3	--	--
Total	24	3	20	5	25	3	15	6	--	--
Neutral										
white	29	6	33	--	31	3	42	--	50	--
egg shell	24	6	14	--	13	--	21	--	50	--
off white	12	--	5	--	--	--	12	--	--	--
gray	29	6	33	--	26	--	30	--	--	--
smoke	12	6	5	--	5	5	6	--	--	--
black	53	6	57	--	--	49	51	--	--	--
Total	159	30	147	--	75	57	152	--	100	--

*Number of the 142 students in each category

TABLE II
 NUMERICAL DISTRIBUTION OF FABRIC HUES DRAPED ON
 FIVE LIGHT COMPLEXIONS

Hue and Value	Intensities of Color									Hue and Value	Intensities of Color								
	High			Middle			Low				High			Middle			Low		
	Becoming	Wearable	Unbecoming	Becoming	Wearable	Unbecoming	Becoming	Wearable	Unbecoming		Becoming	Wearable	Unbecoming	Becoming	Wearable	Unbecoming	Becoming	Wearable	Unbecoming
Yellow										Red-violet									
light	-	-	-	1	1	3	-	-	-	light	-	-	-	5	0	0	-	-	-
medium	1	1	3	-	-	-	-	-	-	medium	-	-	-	-	-	-	3	2	0
dark	-	-	-	-	-	-	0	0	5	dark	2	3	0	-	-	-	-	-	-
Yellow-green									Red										
light	-	-	-	0	2	3	-	-	-	light	-	-	-	-	-	-	4	1	0
medium	0	1	4	-	-	-	-	-	-	medium	-	-	-	3	2	0	-	-	-
dark	-	-	-	-	-	-	0	1	4	dark	0	5	0	-	-	-	-	-	-
Green									Red-orange										
light	-	-	-	-	-	-	0	3	2	light	-	-	-	-	-	-	4	1	0
medium	-	-	-	0	5	0	-	-	-	medium	-	-	-	3	2	0	-	-	-
dark	0	3	2	-	-	-	-	-	-	dark	1	4	0	-	-	-	-	-	-
Blue-green									Orange										
light	-	-	-	-	-	-	2	3	0	light	-	-	-	-	-	-	1	3	1
medium	-	-	-	5	0	0	-	-	-	medium	0	5	0	-	-	-	-	-	-
dark	5	0	0	-	-	-	-	-	-	dark	-	-	-	0	3	2	-	-	-
Blue									Yellow-orange										
light	-	-	-	1	3	1	-	-	-	light	-	-	-	-	-	-	4	1	0
medium	0	5	0	-	-	-	-	-	-	medium	0	3	2	-	-	-	-	-	-
dark	0	3	2	-	-	-	-	-	-	dark	1	4	0	-	-	-	-	-	-
Blue-violet									Brown										
light	0	2	3	-	-	-	-	-	-	light	-	-	-	-	-	-	3	2	0
medium	-	-	-	0	3	2	-	-	-	medium	-	-	-	-	-	-	3	2	0
dark	-	-	-	-	-	-	0	3	2	dark	3	2	0	-	-	-	-	-	-
Violet									Neutrals										
light	-	-	-	2	3	0	-	-	-	white	0	5	0	-	-	-	-	-	-
medium	0	4	1	-	-	-	-	-	-	gray	0	5	0	-	-	-	-	-	-
dark	-	-	-	-	-	-	0	4	1	black	0	5	0	-	-	-	-	-	-

TABLE III

NUMERICAL DISTRIBUTION OF FABRIC HUES DRAPED ON
FIVE LIGHT BROWN COMPLEXIONS

Hue and Value	Intensities of Color									Hue and Value	Intensities of Color								
	High			Middle			Low				High			Middle			Low		
	Becoming Wearable	Unbecoming		Becoming Wearable	Unbecoming		Becoming Wearable	Unbecoming			Becoming Wearable	Unbecoming		Becoming Wearable	Unbecoming		Becoming Wearable	Unbecoming	
Yellow										Red-violet									
light	-	-	-	1	2	2	-	-	-	light	-	-	-	5	0	0	-	-	-
medium	1	3	1	-	-	-	-	-	-	medium	-	-	-	-	-	-	3	2	0
dark	-	-	-	-	-	-	3	2	0	dark	0	3	2	-	-	-	-	-	-
Yellow-green										Red									
light	-	-	-	3	2	0	-	-	-	light	-	-	-	-	-	-	3	2	0
medium	2	3	0	-	-	-	-	-	-	medium	-	-	-	3	2	0	-	-	-
dark	-	-	-	-	-	-	1	4	0	dark	1	3	1	-	-	-	-	-	-
Green										Red-orange									
light	-	-	-	-	-	-	2	3	0	light	-	-	-	-	-	-	5	0	0
medium	-	-	-	0	5	0	-	-	-	medium	-	-	-	3	2	0	-	-	-
dark	0	3	2	-	-	-	-	-	-	dark	1	3	1	-	-	-	-	-	-
Blue-green										Orange									
light	-	-	-	-	-	-	3	2	0	light	-	-	-	-	-	-	1	3	1
medium	-	-	-	3	2	0	-	-	-	medium	0	4	1	-	-	-	-	-	-
dark	1	4	0	-	-	-	-	-	-	dark	-	-	-	0	5	0	-	-	-
Blue										Yellow-orange									
light	-	-	-	2	1	2	-	-	-	light	-	-	-	-	-	-	3	2	0
medium	1	2	2	-	-	-	-	-	-	medium	0	3	2	-	-	-	-	-	-
dark	0	5	0	-	-	-	-	-	-	dark	0	4	1	-	-	-	-	-	-
Blue-violet										Brown									
light	1	3	1	-	-	-	-	-	-	light	-	-	-	-	-	-	3	2	0
medium	-	-	-	1	4	0	-	-	-	medium	-	-	-	-	-	-	1	3	1
dark	-	-	-	-	-	-	1	4	0	dark	3	2	0	-	-	-	-	-	-
Violet										Neutrals									
light	-	-	-	0	3	2	-	-	-	white	0	5	0	-	-	-	-	-	-
medium	1	3	1	-	-	-	-	-	-	grey	0	2	3	-	-	-	-	-	-
dark	-	-	-	-	-	-	0	3	2	black	0	5	0	-	-	-	-	-	-

TABLE IV

NUMERICAL DISTRIBUTION OF FABRIC HUES DRAPED ON
FIVE MEDIUM BROWN COMPLEXIONS

Hue and Value	Intensities of Color						Hue and Value	Intensities of Color					
	High		Middle		Low			High		Middle		Low	
	Becoming Wearable	Unbecoming	Becoming Wearable	Unbecoming	Becoming Wearable	Unbecoming		Becoming Wearable	Unbecoming	Becoming Wearable	Unbecoming	Becoming Wearable	Unbecoming
Yellow							Red-violet						
light	-	-	-	2	2	1	light	-	-	-	5	0	0
medium	-	3	2	-	-	-	medium	-	-	-	-	-	-
dark	-	-	-	-	-	-	dark	0	3	2	-	-	-
Yellow-green							Red						
light	-	-	-	3	2	0	light	-	-	-	-	-	-
medium	0	3	2	-	-	-	medium	-	-	-	3	2	0
dark	-	-	-	-	-	-	dark	3	2	0	-	-	-
Green							Red-orange						
light	-	-	-	-	-	-	light	-	-	-	-	-	-
medium	-	-	-	1	4	0	medium	-	-	-	2	3	0
dark	2	2	1	-	-	-	dark	1	4	0	-	-	-
Blue-green							Orange						
light	-	-	-	4	1	0	light	-	-	-	-	-	-
medium	2	2	1	-	-	-	medium	0	5	0	-	-	-
dark	1	4	0	-	-	-	dark	-	-	-	0	5	0
Blue							Yellow-orange						
light	-	-	-	2	2	1	light	-	-	-	-	-	-
medium	0	1	4	-	-	-	medium	0	3	2	-	-	-
dark	0	4	1	-	-	-	dark	1	2	2	-	-	-
Blue-violet							Brown						
light	0	3	2	-	-	-	light	-	-	-	-	-	-
medium	-	-	-	0	3	2	medium	-	-	-	-	-	-
dark	-	-	-	-	-	-	dark	0	3	2	-	-	-
Violet							Neutrals						
light	-	-	-	3	2	0	white	5	0	0	-	-	-
medium	1	3	1	-	-	-	grey	1	3	1	-	-	-
dark	-	-	-	-	-	-	black	3	2	0	-	-	-

TABLE V

NUMERICAL DISTRIBUTION OF FABRIC HUES DRAPED ON
FIVE DARK BROWN COMPLEXIONS

Hue and Value	Intensities of Color									Hue and Value	Intensities of Color								
	High			Middle			Low				High			Middle			Low		
	Becoming	Wearable	Unbecoming	Becoming	Wearable	Unbecoming	Becoming	Wearable	Unbecoming		Becoming	Wearable	Unbecoming	Becoming	Wearable	Unbecoming	Becoming	Wearable	Unbecoming
Yellow										Red-violet									
light	-	-	-	2	0	3	-	-	-	light	-	-	-	3	2	0	-	-	-
medium	1	1	3	-	-	-	-	-	-	medium	-	-	-	-	-	-	0	3	2
dark	-	-	-	-	-	-	1	1	3	dark	0	3	2	-	-	-	-	-	-
Yellow-green										Red									
light	-	-	-	4	1	0	-	-	-	light	-	-	-	-	-	-	4	1	0
medium	1	3	1	-	-	-	-	-	-	medium	-	-	-	3	2	0	-	-	-
dark	-	-	-	-	-	-	2	2	1	dark	2	1	2	-	-	-	-	-	-
Green										Red-orange									
light	-	-	-	-	-	-	1	2	2	light	-	-	-	-	-	-	2	3	0
medium	-	-	-	2	2	1	-	-	-	medium	-	-	-	2	1	2	-	-	-
dark	2	1	2	-	-	-	-	-	-	dark	1	3	1	-	-	-	-	-	-
Blue-green										Orange									
light	-	-	-	-	-	-	2	2	1	light	-	-	-	-	-	-	1	3	1
medium	-	-	-	2	2	1	-	-	-	medium	0	0	5	-	-	-	-	-	-
dark	2	2	1	-	-	-	-	-	-	dark	-	-	-	0	3	2	-	-	-
Blue										Yellow-orange									
light	-	-	-	1	2	2	-	-	-	light	-	-	-	-	-	-	4	1	0
medium	1	2	2	-	-	-	-	-	-	medium	0	3	2	-	-	-	-	-	-
dark	1	4	0	-	-	-	-	-	-	dark	3	1	1	-	-	-	-	-	-
Blue-violet										Brown									
light	0	3	2	-	-	-	-	-	-	light	-	-	-	-	-	-	3	2	0
medium	-	-	-	3	2	0	-	-	-	medium	-	-	-	-	-	-	3	2	0
dark	-	-	-	-	-	-	0	3	2	dark	2	2	1	-	-	-	-	-	-
Violet										Neutrals									
light	-	-	-	4	1	0	-	-	-	white	3	2	0	-	-	-	-	-	-
medium	2	1	2	-	-	-	-	-	-	grey	2	2	1	-	-	-	-	-	-
dark	-	-	-	-	-	-	0	0	5	black	2	3	0	-	-	-	-	-	-

TABLE VI

NUMERICAL DISTRIBUTION OF FABRIC HUES DRAPED ON FIVE VERY DARK COMPLEXIONS

Hue and Value	Intensities of Color									Hue and Value	Intensities of Color								
	High			Middle			Low				High			Middle			Low		
	Becoming	Wearable	Unbecoming	Becoming	Wearable	Unbecoming	Becoming	Wearable	Unbecoming		Becoming	Wearable	Unbecoming	Becoming	Wearable	Unbecoming	Becoming	Wearable	Unbecoming
Yellow										Red-violet									
light	-	-	-	0	2	3	-	-	-	light	-	-	-	3	2	0	-	-	-
medium	0	0	5	-	-	-	-	-	-	medium	-	-	-	-	-	-	2	2	1
dark	-	-	-	-	-	-	1	2	2	dark	0	0	5	-	-	-	-	-	-
Yellow-green										Red									
light	-	-	-	2	1	2	-	-	-	light	-	-	-	-	-	-	5	0	0
medium	0	3	2	-	-	-	-	-	-	medium	-	-	-	4	1	0	-	-	-
dark	-	-	-	-	-	-	2	2	1	dark	0	1	4	-	-	-	-	-	-
Green										Red-orange									
light	-	-	-	-	-	-	2	3	0	light	-	-	-	-	-	-	4	1	0
medium	-	-	-	3	2	0	-	-	-	medium	-	-	-	3	2	0	-	-	-
dark	0	1	4	-	-	-	-	-	-	dark	1	1	3	-	-	-	-	-	-
Blue-green										Orange									
light	-	-	-	-	-	-	2	3	0	light	-	-	-	-	-	-	0	4	1
medium	-	-	-	3	2	0	-	-	-	medium	0	1	4	-	-	-	-	-	-
dark	3	2	0	-	-	-	-	-	-	dark	-	-	-	0	2	3	-	-	-
Blue										Yellow-orange									
light	-	-	-	2	1	2	-	-	-	light	-	-	-	-	-	-	2	3	0
medium	0	1	4	-	-	-	-	-	-	medium	3	2	0	-	-	-	-	-	-
dark	1	4	0	-	-	-	-	-	-	dark	1	2	2	-	-	-	-	-	-
Blue-violet										Brown									
light	1	1	3	-	-	-	-	-	-	light	-	-	-	-	-	-	5	0	0
medium	-	-	-	2	2	1	-	-	-	medium	-	-	-	-	-	-	3	1	1
dark	-	-	-	-	-	-	1	2	2	dark	0	3	2	-	-	-	-	-	-
Violet										Neutrals									
light	-	-	-	0	3	2	-	-	-	white	0	5	0	-	-	-	-	-	-
medium	1	3	1	-	-	-	-	-	-	gray	0	5	0	-	-	-	-	-	-
dark	-	-	-	-	-	-	0	2	3	black	0	5	0	-	-	-	-	-	-

TABLE VII

SUMMARY OF DATA ON NUMERICAL DISTRIBUTION
OF FABRIC HUES DRAPED ON COMPLEXIONS

Hue	Complexion Types														
	Light			Light Brown			Medium Brown			Dark Brown			Very Dark Brown		
	Be-coming	We-ara-ble	Un-be-coming	Be-coming	We-ara-ble	Un-be-coming	Be-coming	We-ara-ble	Un-be-coming	Be-coming	We-ara-ble	Un-be-coming	Be-coming	We-ara-ble	Un-be-coming
Yellow	2	2	11	5	7	3	4	7	4	4	2	9	1	4	10
Yellow-green	0	4	11	6	9	0	4	9	2	7	6	2	4	6	5
Green	0	11	4	2	11	2	4	9	2	5	5	5	5	6	4
Blue-green	12	3	0	7	8	0	7	7	1	6	6	3	8	7	0
Blue	1	11	3	3	8	4	2	7	6	3	8	4	4	7	4
Blue-violet	0	8	7	3	11	1	0	9	6	3	8	4	4	5	6
Violet	2	11	2	1	9	5	4	8	3	6	2	7	1	8	6
Red-violet	10	5	0	8	5	2	7	5	3	3	8	4	5	4	6
Red	7	6	2	7	7	1	11	4	0	9	4	2	9	2	4
Red-orange	8	7	0	9	5	1	8	7	0	5	7	3	8	4	3
Orange	1	11	3	1	12	2	0	15	0	1	6	8	0	7	8
Yellow-orange	5	7	3	3	9	3	3	8	4	7	5	3	6	7	2
Brown	9	6	0	7	7	1	3	9	3	8	6	1	8	4	3
Neutral colors	0	15	0	0	12	3	9	5	1	7	7	1	0	15	0

CHAPTER IV

EVALUATION OF COLOR SELECTION ON THE BASES OF COMPLEXION TONES

Variations in Complexion Tones

The many degrees of variations recognized in the skin coloring of Negroes are difficult to describe. Herskovits has said:

"In a class at Howard University, I have obtained from the students twenty-four different names for various degrees for skin color. This fact indicates the importance in which this trait is held by Negroes."¹

It was observed from this study that many people in evaluating personal skin coloration, had a tendency to reckon their skin color lighter than it actually is. A series of social studies made by Charles S. Johnson and others indicated that this same tendency existed among Negroes in these studies. That so much significance is attached to skin coloration in the United States is explained by evidences of the prestige gained, even within the group, on the basis of skin coloration.

Many names have been used to describe the various degrees of complexion tones found in the Negro race. Some of those in

¹ Melville Herskovits, op. cit., p. 241

common use are listed below.

Half white	Light
High yellow	Dirty Yellow
Fair	High brown
Bright	Olive
Yellow	Light brown
Mulatto	Teasing brown
Creole brown	Dark brown
Medium brown	Chocolate brown
Brown	Dark
Brown skin	Black
Tan	Rusty black
Blue black	

These names are irrelevant to the study except that they are descriptive terms used by some people for the types chosen for use in this study. Opinions would probably vary as to the classifying of these names under the specific categories used in this study.

It should be recognized here that the very dark brown type used in this study does not represent the darkest found among Negroes. Nor is there evidence that there are darker students here at the institution who represent the darkest types of Negro skin coloration. It is safe to say that there is no type in the study which should be considered darker than very dark brown. The range of complexion variations at Tennessee Agricultural and Industrial State College seems to be covered by the five general types used. The validity of the complexion samples of the study is confirmed by observation of various students who were not actual samples.

Problems in the Selection of Colors

Color preferences of people are to a large degree bound up with associations of other experiences. An attitude toward color may be affected by the individual having seen it worn by a person whom is especially liked or disliked or if it has been prominently connected with experiences pleasant or otherwise. Nevertheless a preference for blue over other colors seems to be fairly general. The results of these findings relative to color preference, however, are limited in significance because a change in value or intensity of a hue or in the background against which it is seen may change its place in the scale of preference.

This observation was made in the discussion of selecting colors by Donovan:

"It is interesting to note that the order in preference of the rainbow colors, by people, in general, is blue, green, red, violet, yellow, and orange."²

Although this indication of preference is general, the same color scheme does not appeal to everyone. John King states that:

Persons of refined temperament are best pleased with soft delicate colors and shades. People who are less refined admire deeper tones; yet, want absolute harmony, while coarse individuals are satisfied with bright gaudy colors.³

In collecting the information on colors thought to be becoming

²Dulcie Donovan, op. cit., p. 59.

³John King, The Art of Using Color, p. 27.

and those avoided, it seemed advisable to list color hues as they appear on color charts used in the teaching of color and associate these hues with colors as they are known by commercial names. It is recognized that commercial names of colors are often confusing as a commercial name referring to a specific hue may change with each season. However, the attempt was made to select the commercial names for this study from those which remain fairly constant season after season. Concerning this, Baldt has stated:

"The need of a more accurate color terminology is obvious, for while a fanciful association of ideas is pleasing more definite meanings are necessary in order to convey clear mental images of color."⁴

Listed below are some of the reasons regarding the colors avoided, as reported on questionnaires.

1. Color tone too near tone of skin coloration.
2. Colors clash with hair coloring.
3. Colors do not bring natural skin coloration.
4. Colors do not blend with complexion.
5. Colors are not becoming.
6. Colors do not flatter complexion.
7. Colors darken skin color.
8. General dislike for the color.
9. Colors seem to add age.

⁴Laura Baldt, op. cit., p. 59

10. Colors do not harmonize with personality.
11. Colors give a sickly looking appearance.
12. Colors dull complexion.
13. Colors look peculiar.
14. Black conflicts with brown skin.
15. Colors are too vivid.
16. Colors disliked by husband.

Color Principles Applicable to Successful Costuming

The importance of color and texture deserves mention here since the effect of the material on the color depends to a large degree upon the composition and finish of the material and whether the surface is smooth or rough. The clothing one wears may be composed of a variety of fabrics such as cotton, wool, silk, and rayon in whole or part. The appearance of the fabric has a great influence on the attractiveness of the garment. To illustrate: cotton is more or less dull; wool has depth of color; silk has deep pearly luster; and rayon has metallic luster.

Objects such as clothing are seen by reflected light, that is, by the light from the sun or an illuminated object which strikes the material and is reflected to the eye. If the surface is smooth the rays are reflected at the same angle and appear bright or shiny, that is, they have luster as displayed by silk and rayon. If the surface is porous, the rays are not reflected regularly, but at different angles and the surface appears dull as

in cotton. Luster varies with the smoothness of the surface and with the composition of the fabric.⁵

Luster affects (to a remarkable degree) the appearance of the person wearing the costume. A high lustered fabric emphasizes defects if there are any because it reflects light and leaves a distinct after image. A dull lustered fabric leaves a duller after image and therefore minimizes irregularities. These points together with complexion consideration must be observed. From the information given by the students, rough and porous textures as in net basket-woolens, gabardines, and crepe are most commonly worn with the second tendency being along the lines of smooth and dull lustered materials as taffetas, plain or printed silks. Satin, a high lustered fabric, which focuses attention on skin imperfections and other undesirable personal characteristics is described as one of the least commonly worn fabrics.

In planning wardrobes, some students have probably never stopped to consider what influences their choice of colors. In choosing a color scheme for a costume, one should endeavor to determine his own personal scheme of colors and build upon this as a foundation. Every person is distinctly a color type, the type of the individual being determined by the coloring of the complexion, hair, and eyes. The coloring of the skin is the most important phase of ones personal coloring, because the area of skin is larger and therefore more conspicuous. For this reason the applying of the

⁵ William Dooley, op. cit., p. 58.

basic principles of color in relation to skin coloration should serve as the predominating basis for selecting colors. Exceptions to this order may be made when either the hair or the eyes are outstanding. Even then care should be taken not to wear colors that are unbecoming to the skin.

Dyer lists two principles which should be kept in mind to aid in selecting becoming colors.

(a) The good points of one's complexion as well as the poor are emphasized by repetition and by contrast.

(b) Colors reflect their complements, and a color will appear more vivid if next to its complement.⁶

These principles should be applied in "playing up" good qualities and in "playing down" bad ones in choosing costumes. It is an easy matter, however, not to be aware of the defects which one sees daily, yet never actually observes.

Variations were noted in observing the hue of recessive skin tones and surface skin tones of subjects used in the study. Red-orange recessive tones seem to be predominant in some of the subjects whereas yellow-orange seems to be the predominating tone of others. This in most instances was in accord with the reading of the red element as measured by the color top.

⁶ Elizabeth Dyer, Textile Fabrics, p. 136.

The hues of the surface skin tones may be said to have been classed with the family of "oranges" for all browns and tans are grade tones of oranges and reds.

"The standard color and the intermediate hues are said to form families of color. In the green family there is standard green (green in its purest form); yellow-green, and blue-green. In the blue family, we have standard blue, violet-blue, and green-blue. The family name is always mentioned last and indicates the predominant tone of color. The difference between green-blue and blue-green is that in the former there is more blue than green and in the latter there is more green than blue."⁷

In the family of oranges there are orange, red-orange and yellow-orange. Various tones of browns and tans result from the modifications of different values and intensities of these hues. It was noted in making notations of the effects of color upon skin, that one cannot be content to say that blue is becoming but it must be determined which blue is most becoming--light, medium or dark value, or high, middle or low intensity. Because the individual cannot wear all color tones, it was necessary that the three dimensions of color, hue, value, and intensity be considered in making the notations for this study. The notations indicated that some complexions within the same group were improved by vivid

⁷Elizabeth Dyer, op. cit., p. 126.

colors; others by medium colors; while still others were improved by greyed or dulled colors.

The experiments revealed that pale, neutral or sallow complexions were accentuated by the use of colors in medium values and in middle intensities. The following findings were indicated by tabulations of the color readings:

--For light complexions

1. Low intensity most becoming.
2. High intensity most wearable.
3. Becoming colors, blue-green, red-orange, red-violet.
4. Unbecoming colors, yellow, yellow-green.

--For light brown complexions

1. Low intensity colors most becoming.
2. High intensity colors more frequently wearable.
3. Becoming colors in tones of red-orange, red-violet, red and blue-green.
4. Unbecoming colors--violets.

--For medium brown complexions

1. Middle intensity colors most frequently becoming.

2. High intensity colors most frequently unbecoming.
3. Becoming colors, red, red-orange, red-violet and blue-green.
4. Unbecoming colors, blue and blue-violet.

--For dark brown complexions

1. Middle intensity colors most frequently becoming.
2. High intensity colors most frequently unbecoming.
3. Most frequently becoming colors were tones of red-brown and blue-green.
4. Most frequently unbecoming colors were tones of violet and yellow.

--For very dark brown complexions

1. Low intensity colors most frequently becoming and wearable.
2. High intensity colors most frequently unbecoming.
3. Most frequently becoming colors were tones of red, red-orange, blue-green and brown.

4. Most frequently unbecoming colors were tones of yellow and orange.

Suggestions for Overcoming Color Problems

Many of the problems, stated by students in regard to wearing colors, may be overcome by wise foresight in the selection of colors. In order to select colors more wisely, one must be able to analyze her own coloring. That is, she must be able to decide to what general color type she belongs; whether her coloring is pale, average or florid; which colors are becoming and what colors should be avoided.

It is hoped that the results of the color readings, in this investigation, may serve as a guide to students in choosing colors; yet, because of the general nature of the study it must be understood that critical judgment by a trained person of each color and its effect upon the appearance of an individual should be the final judge of the becomingness and suitability of colors. Colors should always be tried before buying them as the contact of a color with the complexion, hair and eyes is the only sure way of finding becoming colors. When trying colors the hues, tints and shades that bring out good features and obscure the bad ones should be decided upon.

Color harmony is dependent upon a combination of colors which give pleasure and a complete impression of unity. Unless one has had

a great deal of practice in combining colors successfully, the harmonies known as Standard Color Harmonies should be followed.⁸

Color in the face seems to be increased by the use of light, pale tints of colors in the Red Family. These colors reflect a pinkish glow in the skin and may be used rather than too much rouge in accentuating the natural coloring of the skin. The person with too much coloring in her skin may find neutralized tones of these same colors more becoming.

The appearance of color in the face seems to be lessened by the use of vivid, intense colors. These colors seem to neutralize or fade the skin coloring by means of their greater strength. Therefore, the person who is pale should avoid intense colors and choose colors from the middle intensities, as these in most instances, will be more becoming.

Sallowness in skins seems to be increased in effect when neutral colors or values similar to the skin are worn. The neutral shades, for example, light grays, tans, and grayed golds, afford insufficient contrast giving a monotonous effect and emphasizing the lack of life in the skin.

Shadows or lines in the face, circles under the eyes and other undesirable effects seem to be emphasized by the use of colors or fabrics which reflect light in the skin.

Intense, vivid colors are more becoming in soft, dull lustered

⁸ Snow, Bonnie E. and Froehlich, Hugo, The Theory and Practice of Color.

fabrics. Extremely shiny fabrics, like satin, make almost any color difficult to wear as they reflect color in the face, showing up its imperfections. Satins are less difficult to wear when a soft warm light is reflected. The effect of vivid colors or shiny fabric surfaces may also be relieved by use of a duller texture near the face.

Dark colors or those of vivid intensity are relieved by use of lighter values and more neutralized intensities near the face.

Choice of color in clothing according to skin coloration, so as to aid in the cultivation of better general taste among darker-skinned women. It was undertaken because of evidences of a lack of knowledge among college women at the institution in choosing and harmonizing colors to enhance their complexions. It was ascertained that the wide range of complexion variations in the Negro race is significant enough to warrant a different set of principles for choosing colors than those used by caucasian people.

The problem was explored on the fundamental principle that colors for clothing may be chosen effectively upon the basis of individual skin coloration and personal characteristics affected by color.

Two kinds of information were sought in the investigation: (1) the present status of color selection and (2) information regarding colors which might be worn effectively by persons of varied complexion types and those that should be avoided. Data for the first type of information, were secured by distributing the survey questionnaires to students representing a sample of the

CHAPTER V

SUMMARY AND RECOMMENDATIONS

The purpose of this investigation was to analyze five varied complexions at Tennessee Agricultural and Industrial State College in an attempt to determine upon what basis appropriate colors for clothing might be selected by Negro women of these types. It further proposed to recommend principles which may be used to govern the choice of color in clothing according to skin coloration, so as to aid in the cultivation of better general taste among darker-skinned women. It was undertaken because of evidences of a lack of knowledge among college women at the institution in choosing and harmonizing colors to enhance their complexions. It was assumed that the wide range of complexion variations in the Negro race is significant enough to warrant a different set of principles for choosing colors than those used by caucasian people.

The problem was explored on the fundamental principle that colors for clothing may be chosen effectively upon the basis of individual skin coloration and personal characteristics affected by color.

Two kinds of information were sought in the investigation:

- (1) the present status of color selection and evaluation by students, and
- (2) information regarding colors which might be worn effectively by persons of varied complexion types and those that should be avoided.

Data, for the first type of information, were secured by distributing two hundred questionnaires to students representing a sample of the

population at Tennessee Agricultural and Industrial State College. Data for the second type of information were secured by experiments with twenty-five students to observe the effect of fabric hues to varied complexion tones.

In addition to these data, information, devices and materials with which to make the investigation more valid, were sought. These were concerned with scientific classification of Negro complexion types and a reliable means of measuring the amount of pigmentation in dark skins.

Problems stated by students in relation to selecting and wearing colors indicated a limited color knowledge among students. However, a desire to increase this knowledge was expressed in order to achieve more charm and beauty in the wearing of colors.

The complexion variations at this institution were classified into five general types for use in this study. Five representatives from each of the five complexion types were used for experiment. The experiments revealed that certain colors in fabrics were more frequently becoming than others in each of the complexion types tested.

From the analyses of the colors becoming to different types of the individuals, general suggestions or hints may be given. These suggestions are helpful as an indication of colors that may be tried on individuals, but should be used in conjunction with personal analysis and critical judgment of each color and its effect upon appearance.

Significant Findings

1. Insufficient scientific study on the classification of Negro complexions by manufacturers of cosmetics for Negro use.
2. The tendency of many of students to reckon skin coloration lighter than it is.
3. Darkest types of Negro skin coloration not represented at Tennessee Agricultural and Industrial State College.
4. Color preferences of students better on the basis of emotional effects produced than in harmonizing with skin coloration.
5. Blue is the most preferred color of students used in the study.
6. Seventy-one per cent of students inconsistent in responses relating to how individual color choices are made and the factors considered as predominating bases for color selection.
7. Warm colors are predominately becoming to varied tones of brown complexions.
8. The effects of color on the complexion varies with the value and intensity of the color.
9. Deep colored dull lustered fabrics produce more pleasing effects on the complexions studied.
10. Individuals who have clear, smooth complexions may wear most colors becomingly provided that there is not too great a contrast between the value of the skin coloring and the colors selected.
11. High interest shown by students, faculty members, and others for information concerning the selection of harmonious, enhancing colors.

Principles of Color Selection

A few principles which were evolved from the present investigation should be kept in mind to help in selecting becoming colors:

1. Colors should be chosen by beginning with the hue and value of skin pigmentation.
2. The color of the skin and the color worn tend to overshadow or dominate each other if the contrast between the two is too great.
3. A monotonous effect is produced when the hue and value of the color worn is too near the hue and value of skin pigmentation.
4. Cool colors complement the warm colors and may be worn by persons with very warm complexion coloration.
5. Colors which make up the orange family are harmonious with practically all brown complexion tones because brown is a tone of orange, therefore, forming a monochromatic color harmony.

Recommendations

1. Charts and equipment used in study should be used in classrooms in connection with clothing and related color courses.
2. The Home Economics division should inaugurate a good-grooming clinic including a skin analysis, to be open to the student body at large.

3. A Fellowship fund should be created for further research of color in relation to Negro skin coloration.
4. Commercial companies should establish good-grooming clinics to be operated on a paying basis.
5. Commercial companies should invest in opportunities for research in the matter of color.
6. That Negro teachers learn to teach applied color in clothing according to standards adaptable to Negro complexions rather than by standards set up for people whose skins are fair which are found in most textbooks and other reference material.
7. That a commercial list of colors be worked out and standardized for use in the clothing classes so as to avoid confusion in the purchasing of colors.
8. That Home Economics instructors emphasize good-grooming and personal appearance in all of their courses so as to thoroughly integrate applied art in Home Economics.
9. That further study of color in clothing be made based upon skin, hair, and eye coloration.
10. That a scientific experimental study be made on this subject in an uncontrolled and a controlled situation.
11. This information should be extended to clothing retailers for use in guiding Negro customers along the line of making becoming color choices in wearing apparel.
12. That applied color instruction relative to clothing should be started in the primary grades and should be continuous throughout

the school experience.

13. That all teachers should be trained to give guidance to students in all courses in selecting clothing to improve personal appearance.

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2. Indicate the words which most adequately describe your skin:
- clear, blooded, oily, dry, large pores, rough
3. On what basis do you select colors to wear? Check below.
- a. Skin coloration () b. Hair color () c. Eye color ()
 d. Color Principles () e. Fashion () f. Economy ()
4. Check opposite the fabrics which you most commonly wear for that season in column below.

Season	Casual or Sport	Formal
Woolen	Woolen-rough	Woolen
Satin	Serge	Satin
Net	Gabardine	Net
Jersey	Woolen-woolens	Jersey
Draps	Rayon crepe	Draps
Silk-plain or bias	Silk rayon	Silk
	Jersey	
	Silk-print or bias	

APPENDIX A

Personal Color Analysis Sheet (Continued)

Name _____

Course and Number _____

Personal Color Analysis Sheet

Skins: Light Light Brown Medium Brown Dark Brown Very Dark Brown

Hair: Black Dark Brown Light Brown Blonde Reddish

Eyes: Black Dark Brown Gray to Greenish Light Brown to Yellowish

1. Check color types to which you THINK you belong:

Skin _____ Hair _____ Eyes _____

2. Underscore the words which most adequately describe your skin:

clear blemished oily dry large pores rough

3. On what basis do you select colors to wear? Check below.

a. Skin coloration () b. Hair color () c. Eye Color ()
 d. Color Principles () e. Fashion () f. Economy ()

4. Check opposite the fabrics which you most commonly wear for that occasion, in columns below.

Evening	:Casual or School	:Afternoon or Dress
Taffeta	Tweed--rough	Taffeta
Satin	Serge	Satin
Net	Gabardine	Jersey
Jersey	Woolen--basket weave	Crepe
Crepe	Rayon crepe	Silk--plain or print
Silk--plain or print	Spun rayon	Faille
	Jersey	
	Silk--print or plain	

(Personal Color Analysis Sheet Continued)

5. Select from commercial color lists below the colors you believe to be your most becoming. Place one check (x) opposite the most becoming, and two checks (xx) opposite the second most becoming.

Red	: Red-Orange	: Orange	: Yellow-orange	:
Old rose	Tangerine	Burnt orange ✓	Popcorn	White ✓
Pink ✓	Salmon	Terra cotta	Cork	Egg-shell
Scarlet	Coral	Tan ✓	Champagne	Off-white
Maroon	Paprika	Orange	Honey	
Yellow	: Yellow-green	: Green	: Blue-green	: Neutrals
Lemon ✓	Chartreuse	Ever-green	Peacock	Beige
Gold ✓	Bottle-green	Hunter's green	Teal	Tan
Maise	Spring-green	Olive	Turquoise ✓	Brown
		Emerald	Aqua	
Blue	: Blue-Violet	: Violet	: Red-Violet	:
Baby blue	Iris	Orchid	Amethyst ✓	Gray
Sky blue	Lilac	Purple ✓	Fushia ✓	Smoke
Copenhagen	Wisteria	Lavender	Egg-plant	Black ✓
Navy	Cornflower		Raspberry	

6. (a) From the above color chart, list three colors which you avoid in which you avoid them. (1) _____ (2) _____
 (3) _____ (b) Tell why _____.
7. Underscore the item below which you consider SHOULD be the predominating basis for color selection in harmony with your complexion type.
- a. Skin coloration and hair
 - b. Skin coloration and eyes
 - c. Skin coloration and principles of color
 - d. Skin coloration and economy
 - e. Skin coloration and fashion
8. Explain in space below your individual color problems.

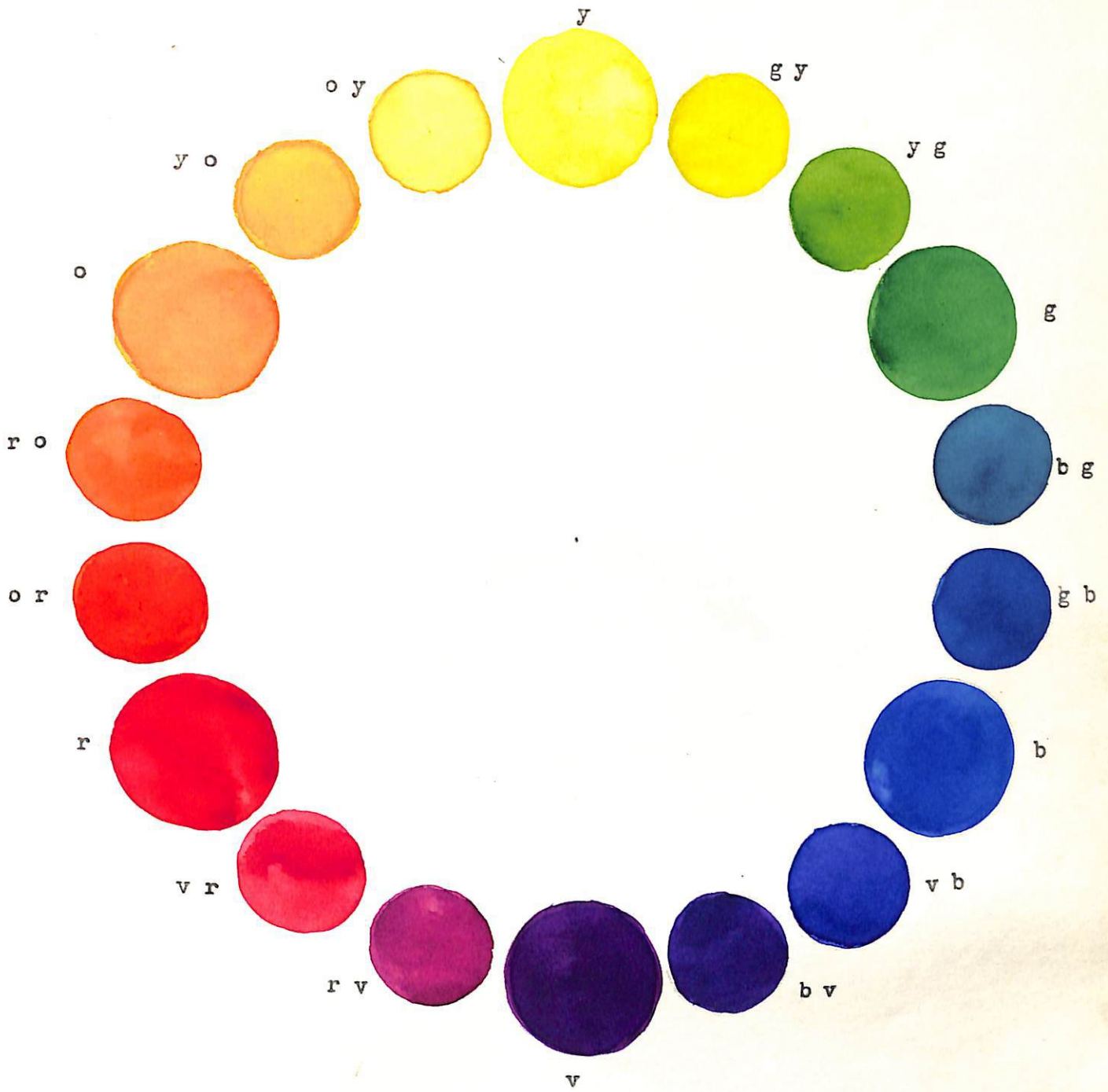


Chart 1

Color Wheel

Standard and Intermediate Hues



Chart 2

The Bradley Color Top

Explanation of Individual Complexion Charts

The following charts are included as illustrations to support these facts:

1. Warm colors enhance the darker complexions most except when cooler colors are light or dark and neutralized.
2. Warm colors enhance darker complexions when used in neutralized intensities unless used as accents over small areas.
3. Strong or intense colors should not be used over large areas for the best effects.
4. If black is worn by the very dark types it should not be worn against the face or arms, but should be relieved by pale tints of color.



Chart 3

Illustration of Light Complexion Type
(with color disk for finding becoming hues)



Chart 4

Illustration of Light Brown Complexion Type
(with color disk for finding becoming hues)



Chart 5

Illustration of Medium Brown Complexion Type
(with color disk for finding becoming hues)



Chart 6

Illustration of Dark Brown Complexion Type
(with color disk for finding becoming hues)



Chart 7

Illustration of Very Dark Brown Complexion Type
(with color disk for finding becoming hues)

APPENDIX C

GLOSSARY

Appropriate colors. As referred to are those colors which enhance the complexion; are in accord with certain recognized principles of color; are befitting the place or occasion.

Basket-weave woolens. A plain colored woolen fabric recognized by the small squares produced by the weave; soft and usually loosely woven.

Clothing. The entire covering of the body including hand, feet, and head covering.

Complementary colors. Two colors--one primary and the other secondary--that unite in themselves the three primary colors.

Complexion. Refers to coloring of the face, neck, and other exposed parts of the skin.

Cool colors. Those colors tending toward blue and violet.

Crepe. A fabric made of highly twisted yarn, extremely versatile in texture ranging from a fine flat crepe to pebbly and mossy effects.

Faille. Flat-ribbed fabric of rayon in plain-weave variations; crisp, dull luster.

Gabardine. A firm, durable fabric with a diagonal weave; spun rayon, wool or cotton or blends.

Hue. That chromatic quality of a color which is indicated by its name.

Intensity. The quality of brightness or dullness of a color as compared with colorless gray.

Intermediate colors. The colors resulting from the mixing of a primary and a secondary color.

Jersey. Rayon or wool fabric plain knitted or ribbed; the rayon fabric has a smooth surface with a dull luster.

Luster. Bright, brilliant.

Net. Porous fabric made with needle, bobbins or machinery. Rayon nets are soft and crisp.

Pigmentation. Coloring matter of the skins.

Primary colors. Three original colors from which all others are produced.

Prints. Rayon fabrics of varied weaves and textures having designs.

Rayon crepe. (Flat crepe) Smoothest of the crepe family often called French crepe.

Satin. A fabric with a highly lustrous surface in a satin weave.

Secondary colors. Orange, purple, green; made by mixing two primary colors.

Serge. A worsted fabric with a twill weave.

Shades. The darker tones of a color--the tones between that color and black.

Spun rayon. Rough, coarse fabric made of yarns of mixed colors giving a variegated effect.

Standard colors. Pure colors which are based on the solar spectrum--yellow, green, blue, violet, red and orange.

Taffeta. Plain, closely woven, smooth, crisp fabric having a dull luster.

Tints. Lighter tones of a color--the tones between that color and white.

Tone. A general term indicating any variation in color.

Tweed. A roughish fabric with wiry, somewhat hairy texture.

Value. The dimension which shows the amount of light or dark in a color.

Varied dark complexion tones. Apply to the entire range of differences in skin coloring of the Negro race.

Warm colors. Those colors tending toward red and orange.

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