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SCHOOL OF MUSIC

PERSONALITY CHARACTERISTICS OF UNDERGRADUATE MUSIC MAJORS IN
SELECTED HISTORICALLY AFRICAN-AMERICAN COLLEGES AND UNIVERSITIES: AN
INVESTIGATION OF RELATIONSHIPS AS MEASURED BY THE MYERS-BRIGGS TYPE
INDICATOR

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment for the

degree of

DOCTOR OF PHILOSOPHY

By

Mark W. Phillips

Norman, Oklahoma

1997

UMI Number: 9724434

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By

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ACKNOWLEDGMENTS

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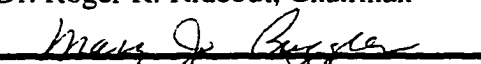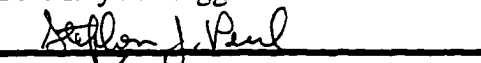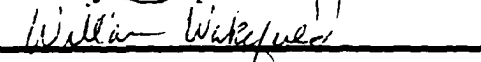
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ABSTRACT

Phillips, Mark Wendell. "Personality Characteristics of Undergraduate Music Majors in Selected Historically African-American Colleges and Universities: An Investigation of Relationships as measured by the Myers-Briggs Type Indicator."

Major Professor: Dr. Roger R. Rideout

The purpose of this study was to determine the personality characteristics of undergraduate music majors at selected historically African-American colleges and universities utilizing Form G of the Myers-Briggs Type Indicator (MBTI). The study extended work by Henderson and Lanning by asking whether differences exist between African-American music majors and traditional college-age music majors whose MBTI types are on record at the Center for the Application of Psychological Type (CAPT) in Gainesville, Florida. The study was the first to focus solely on African-American music majors and compare types according to gender, music degree emphasis, major applied performance area, and academic institution.

The sample consisted of 145 full-time undergraduate music majors between eighteen to twenty-four years of age at six historically African-American colleges and universities across the continental United States. Each school had twenty or more music majors enrolled full-time in undergraduate degree programs. All participating schools were state supported and two were land grant institutions.

Results were reported in the form of type tables with data separated by gender, degree classification (Bachelor of Music or Bachelor of Music Education), applied instrument group (Brass, Woodwind, Voice, Keyboard, or Percussion). The composite sample and

subsamples were compared to the base population of traditional age college students compiled in the CAPT databank. Self-Selection Ratios, Chi Square and Fisher's Exact Probability tests were calculated to determine if any significant differences existed between the base population and the research composite and subsamples. Model MBTI types were determined for the composite and subsamples. At four of the six institutions, the males in the sample differed from base population predictions. The males were dominantly introverts (ISTJ) while databank information indicated they would be extroverts (ESTJ). Base population predictions were confirmed for males at the other two schools. Differences in male students were hypothesized to correlate with differing admission standards and entrance exams in the departments of music, meaning those students whose types were consistent with CAPT predictions had school entrance requirements that might require a more aggressive or extroverted personality. Females in the composite and subsamples met base population predictions at all six schools with the exception of the sensing/feeling scale. Base population predictions were that the females would be feeling types (ESFJ) while the sample females were overwhelmingly (55.56%) thinking types (ESTJ). Brass majors model type was ESTJ while voice majors was ESJ with thinking (T) and feeling (F) equally distributed. The keyboard majors formed a model ISTJ while the woodwind major model was STJ with extroversion (E) and introversion (I) equally distributed. The model for percussion majors was IST with judgment (J) and perception (P) evenly distributed. The Bachelor of Music degree students were predominantly ISTJ while the Bachelor of Music Education degree students were ESTJ. These differences seemed attributable to the number of males or females enrolled in each degree plan, meaning that the dominant personality type of each gender skewed the analysis of subsample data toward that gender's type.

CHAPTER I

INTRODUCTION

Rationale

Every year hundreds of minority students at traditionally African-American colleges and universities choose to concentrate in music as a field of study. Options for degree study at these institutions usually include performance or teacher education and, occasionally, music business, and/or commercial music. Ideally, students select an area that corresponds to their interests and abilities, an area in which daily work and professional expectations match musical talent and intellectual capabilities.

To aid students in selecting a degree concentration, most historically African-American institutions provide departmental counseling with faculty serving as academic advisors. This procedure allows students to examine degree curricula and discuss their interests while meeting the faculty. The counseling objective is to identify the music curriculum that best suits a student's interests and abilities. In this effort faculties and advisors often administer personality and vocational tests in the hope that they will help identify personal and occupational strengths necessary for success in the chosen academic area and, subsequently, professional employment in that area.

These advising attempts have been hampered by the fact that minimal information exists concerning personality characteristics and occupational skills often linked with success in a particular area of music study. Relatively few studies have been completed that examine

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personality characteristics of college music students (Henderson,[1] Rossman,[2] and Lanning[3]) and

those studies were completed without including students from historically African-American

universities and colleges that primarily maintain an African-American student population.

Barbara Henderson administered the Myers-Briggs Type Indicator (MBTI) to music majors

attending eight North Carolina universities in order to determine if dominant MBTI traits prevail

according to gender and specific degree plan pursued. Her intent was to provide a means for

schools to help students measure strengths or problems of which they were unaware.[4] Raymond

Rossman's investigation of directive and nondirective counseling techniques was based on the

student-teaching success of twelve music education students at Morningside College in Sioux City,

Iowa during the fall of 1976. Alice Lanning examined the personality characteristics of

undergraduate music majors at selected colleges and universities in the state of Oklahoma.

Students completed the MBTI and results were compared by institution, degree classification,

performance medium, and gender to determine if significant differences existed between the

various group classifications. Lanning found that music majors differed from CAPT predictions,

implying that African-American students might also differ from such predictions.

While no studies compare the personality characteristics of African-American music majors

to specific musical criteria,[5] that is not to say that African-American students have been excluded

in personality studies. Gaston,[6] May,[7] Bartee[8] and Levy[9] utilized African-Americans attending

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[1]Barbara Henderson, "Music Major Matriculants in North Carolina
Universities: their Personality Types as measured by the Myers-Briggs Type
Indicator." Ph. D. dissertation, University of North Carolina at Greensboro,
1984.
[2]Raymond Rossman, "Myers-Briggs Type Indicator Types of Music Education
Students, Morningside College--Sioux City, Iowa." Paper presented at the third
National CAPT-MBTI Conference, Philadelphia, PA. 1984.
[3]Alice M. Lanning, "Personality Characteristics of Undergraduate Music
Majors in Selected Oklahoma Universities: An Investigation of Relationships
as Measured by the Myers-Briggs Type Indicator." Ph. D. dissertation,
University of Oklahoma. 1990.
[4]Henderson, 5.
[5]Ibid.
[6]Joseph A. Gaston, "A Comparison of the Personality Characteristics of
Northern and Midwestern Urban Afro-American Freshmen, Southern Town
and Rural Afro-America Freshmen, and Southern Afro-American College

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their respective institutions. Wanda M. Johnson,[10] a music education major at Oklahoma State University, compared the learning styles of African-American and White college freshmen without regard to their course of study. Her study focused on the way students vary in their approach to learning and their preferred ways of perceiving and processing information.[11] These various ways represent the individual's learning style.[12]

The personality assessment measure most commonly used by academic counselors is the Myers-Briggs Type Indicator (MBTI),[13] a nationally-normed test that provides an extensive data base for clinical comparisons of personality types to professional areas.[14] In the 1920's MBTI author Katherine Briggs began constructing a measure that classified personality types according to Carl Jung's theory of personality, i.e. that certain characteristics dominate others and that an individual personality can be identified by these dominant/auxiliary traits. Jung suggested three traits and Myers added one more to form the four-scale type preference that constitutes the MBTI today.

> These four preferences are expressed through perceptions, judgments, interests, values, and motivations. The first, extroversion-introversion, tells us how an individual is energized. The second, sensing-intuition, tells what an individual pays attention to while thinking-feeling gives us insight into how

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Student Personnel Staff." Doctoral diss. Michigan State University, 1971.
[7]Alberta O. May, "The Learning Styles, Personality and Temperament Types of Eight and Twelfth-Grade Urban African-American and White Students: A Comparative Study," Dissertation Abstracts International, 1992.
[8]Geraldine M. Bartee, "The Perceptual Characteristics of Disadvantaged Negro and Caucasian College Students." Doctoral diss. East Texas State University, 1968.
[9]Nissim Levy and Clennie Murphy, "Personality Types Among Negro College Students." *Educational and Psychological Measurement*, 32, (1972) 641-653.
[10]Wanda M. Johnson, "A Comparative Analysis of Learning Styles of African-American and White College Freshmen." Doctoral diss. Oklahoma State University, 1989.
[11]Ibid. , 1.
[12]C. Briggs, "Intellectual Differences in Relation to Personal and Family Handedness." *Quarterly Journal of Experimental Psychology*, 14, 192-201, 1908.
[13]Isabel B. Myers and Mary H. McCaulley, *Manual: A Guide to the Development and Use of the Myers-Briggs Type Indicator*, 2d ed. (Palo Alto, CA Consulting Psychologists Press, 1985).
[14]Myers and McCaulley, Center for Applications of Psychological Type, Inc. Gainsville, FL.

an individual makes his decisions. The last, judgment-perception, provides information on the type of life-style an individual adopts.[15]

Isabel Briggs Myers, Katherine Brigg's daughter, continued the development of the measure resulting in the publication of the Myers-Briggs Type Indicator, the only measure to define personality as integrative rather than as a composite of discrete functions. "Myers took Jung's notions of psychological type from the reference shelves of 'expert psychologists' and placed it into the hands of people in many fields."[16] Anthony J. Devito states in his review in *The Ninth Mental Measurements Yearbook* that the MBTI "is probably the most widely used instrument for non-psychiatric populations in the areas of clinical, counseling, and personality testing."[17]

The Myers-Briggs Type Indicator is published in three forms: Form F (166 items), Form G (126 items), and form AV, an abbreviated fifty-item version that is self-scoring. Form G is the standard version and consists of 126 forced-choice questions pertaining to personal preference. Choices are between seemingly inconsequential everyday events chosen by Myers as stimuli to evoke the more comprehensive type preferences.[18] The items chosen most clearly define Jung's type components of perception and judgment and the ways in which these are used differently by people.[19]

The underlying theory is that each individual personality is built on a dichotomous (bipolar) system.[20] One pole acts as the leading or dominant pole, while the other acts as an auxiliary.[21]

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[15]Robert Drummond and Ann H. Stoddard, "Learning Style and Personality Type," *Perceptual and Motor Skills* (1992): 99.

[16]William Yabroff, *The Inner Image*, (Palo Alto, CA: Consulting Psychologists Press, 1990), 6.

[17]Anthony J. DeVito, Review of the Myers-Briggs Type Indicator in James Mitchell, ed., *The Ninth Mental Measurements Yearbook* (Lincoln, NE: The University of Nebraska Press, 1985) 1030.

[18]Isabel B. Myers and Mary H. McCaulley, *Manual: A Guide to the Development and Use of the Myers-Briggs Type Indicator*, 2d ed. (Palo Alto, CA: Consulting Psychologists Press, 1985), 3.

[19]Ibid. , p. 1.

[20]Jess Feist, *Theories of Personality*. 2nd ed. (Fort Worth, TX: Harcourt, Brace, Jovanovich College Publishers, 1990), 184.

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Myers' MBTI terminology differs from Jung's in that she uses four bipolar personality dimensions instead of the three Jung theorized. Extroversion (E) opposes introversion (I), sensing (S) opposes intuition (N), thinking (T) opposes feeling (F), and judgment (J) opposes perception (P). These four combinations yield sixteen possible personality types, each consisting of four dimensions.[22]

Extroversion-introversion are "mutually complementary attitudes whose differences generate the tension that both the individual and society need for the maintenance of life."[23] The introvert concentrates perception and judgment upon ideas and internal values while the extrovert focuses them outwardly toward the external environment.[24] The sensing-intuition index distinguishes between a person's ability or preference for two opposite ways of perceiving. Persons rely on one of the five senses or on intuition to determine meanings, relationships, and/or possibilities that reach the conscious mind.[25] The thinking-feeling index distinguishes the way one reflects on stimuli. Thinking implies that one reaches a conclusion on an impersonal basis while feeling implies that one relies on personal or social values to reach a conclusion.[26] The judgment-perception index describes the process one uses in dealing with the outer world. Judgment types like having things settled whereas perceptive types prefer to keep their plans and opinions open so that no valuable experience or enlightenment is missed.[27]

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[21]Op. Cit. , p. 2.
[22]Ibid. , p. 8.
[23]Ibid. , p. 2.
[24]Isabel Briggs Myers and Peter B. Myers, *Gifts Differing--Understanding Personality Type.* (Consulting Psychologists Press, Inc. 1993) p. 7.
[25]Op. Cit. , p. 2.
[26]Ibid. , p. 2.
[27]*Gifts Differing.* p. 69.

Table 1: *Characteristics Associated With Each Type* [28]

Sensing Types

ISTJ Serious, quiet, earn success by concentration and thoroughness, practical, orderly, matter-of-fact, logical, realistic, and dependable. See to it that everything is well organized. Take responsibility. Make up their own minds as to what should be accomplished and work toward it steadily, regardless of protests or distractions.	ISFJ Quiet, friendly, responsible, and conscientious. Work devotedly to meet their obligations. Lend stability to any project or group. Thorough, painstaking, accurate. Their interests are usually not technical. Can be patient with necessary details. Loyal, considerate, perceptive, concerned with how other people feel.
ISTP Cool onlookers-quiet, reserved, observing and analyzing life with detached curiosity and unexpected flashes of original humor. Usually interested in cause and effect, how and why mechanical things work, and in organizing facts using logical principals.	ISFP Retiring, quietly friendly, sensitive, kind, modest about their abilities. Shun disagreements, do not force their opinions or values on others. Usually do not care to lead but are often loyal followers. Often relaxed about getting things done, because they enjoy the present moment and do not want to spoil it by undue haste or exertion.
ESTP Good at on-the spot problem solving. Do not worry, enjoy whatever comes along. Tend to like mechanical things and sports with friends on the side. Adaptable, tolerant, generally conservative in values. Dislike long explanations. Are best with real things that can be worked, handled, taken apart, or put together.	ESFP Outgoing, easygoing, accepting, friendly, enjoy everything and make things more fun for others by their enjoyment. Like sports and making things happen. Know what's going on and join in eagerly. Find remembering facts easier than mastering theories. Are best in situations that need sound common sense and practical ability with people as well as with things.
ESTJ Practical, realistic, matter-of-fact, with a natural head for business or mechanics, not interested in subjects they see no use for, but can apply themselves when necessary. Like to organize and run activities. May make good administrators, especially if they remember to consider others' feelings and point of view.	ESFJ Warm-hearted, talkative, popular, conscientious, born cooperators, active committee members. Need harmony and may be good at creating it. Always doing something nice for someone. Work best with encouragement and praise. Main interest in things that directly and visibly affect people's lives.

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[28]Op. Cit. , p. 20.

Table 2: *Characteristics Associated with Each Type*

Intuitive Types[29]

INFJ Succeed by perseverance, originality, and desire to do whatever is needed or wanted. Put their best efforts into work. Quietly forceful, conscientious, concerned for others. Respected for their firm principles. Likely to be honored and followed for their clear convictions as to how best to serve the common good.	**INTJ** Usually have original minds and great drive for their own ideas and purposes. In fields that appeal to them, they have a fine power to organize a job and carry it through with or without help. Skeptical, critical, independent, determined, sometimes stubborn. Must learn to yield less important points in order to win the most important.
INFP Full of enthusiasm and loyalties, but seldom talk of these until they know you well. Care about learning, ideas, language, and independent projects of their own. Tend to undertake too much, then somehow get it done. Friendly, but often too absorbed in what they are doing to be sociable. Little concerned with possessions or physical surroundings.	**INTP** Quiet, and reserved. Especially enjoy theoretical or scientific pursuits. Like solving problems with logic and analysis. Usually interested mainly in ideas, with little liking for parties or small talk. Tend to have sharply defined interests. Need careers where some strong interest can be used and useful.
ENFP Warmly enthusiastic, high-spirited, ingenious, imaginative. Able to do almost anything that interest them. Quick with a solution for any difficulty and ready to help anyone with a problem. Often rely on their ability to improvise instead of preparing in advance. Can usually find compelling reasons for whatever they want.	**ENTP** Quick, ingenious, good at many things. Stimulating company, alert and outspoken. May argue for fun on either side of a question. Resourceful in solving new and challenging problems, but may neglect routine assignments. Apt to turn to one new interest after another. Skillful in finding logical reasons for what they want.
ENFJ Responsive and responsible. Generally feel real concern for what others think or want, and try to handle things with due regard for the other person's feelings. Can present a proposal or lead a group discussion with ease and tact. Sociable, popular, sympathetic. Responsive to praise and criticism.	**ENTJ** Hearty, frank, decisive, leaders in activities. Usually good in anything that requires reasoning and intelligent talk, such as public speaking. Are usually well informed and enjoy adding to their fund of knowledge. May sometimes appear more positive and confident than their experience in an area warrants.

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[29]Ibid. , p. 21.

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Five stencils are used to score the Myers-Briggs Type Indicator Forms G or F. Each stencil measures a polarity with different stencils for males and females on the thinking/feeling polarity. All item analyses pertaining to gender in early construction of the MBTI were computed separately for males and females because certain questions were valid only for one sex.[30] The TF scale is weighted separately by gender based on prediction ratios and item popularity. On the TF scale, females had a greater tendency to give feeling responses that males did not exhibit.[31] Each item response is assigned a number that is then converted into a preference score for each index. The preference scores are a letter showing the direction of preference and a number showing the reported strength of the preference. Myers considered the letter to be the more important part of the numerical score.

Table 3: *Sample MBTI Scoring*[32]

Points				Preference Scores Letter plus Number	
E	19	I	6	E	25
S	10	N	17	N	15
T	25	F	7	T	35
J	11	P	11	P	1

The Center for the Application of Psychological Type (CAPT) in Gainesville, Florida now holds the copyright to the MBTI. In an effort to develop interest in the measure, CAPT maintains an extensive databank containing type characteristics of tens of thousands of persons who have taken the test. The databank contains types for African-Americans, yet music majors are not a subsample of that data set. Therefore, a study is needed that a) will define personality

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[30]Ibid. , p. 148.
[31]Ibid. , p. 148.
[32]Ibid. , p. 9.

characteristics of undergraduate music majors at historically African-American institutions so that types can be compared to criteria used in similar studies of other college-age groups and b) will contribute to CAPT's databank on African-Americans. Such a study would provide a basis for other research to determine if personality is a factor in placement and job success. Finally, the essential issues of whether African-American music majors are similar in type to CAPT's base population and other traditional college-age students need to be addressed.

Purpose of the Study

The purpose of this study is to ascertain personality characteristics of undergraduate music majors at selected historically African-American colleges and universities in the United States by administering Form G of the Myers-Briggs Type Indicator. The study will analyze type relationships against the primary occupational categories that apply to music majors, i.e. music education and performance as well as gender and applied study area defined as brass, woodwind, voice, keyboard or percussion.

This study will allow the data to be compared to results from earlier studies to determine if any significant racial differences exist according to gender, applied music area, or degree classification. The study will illustrate how historically African-American institutions can compare the MBTI types for their music students to CAPT's existing data base. The data from this investigation are desperately needed to insure that the minority population is accounted for and included when interpretations are reached pertaining to the personality of music majors.

Problem Statement

The following problem statement defines the scope of the investigation.

1.) How does the Myers-Briggs Type Indicator define and differentiate the personality types of undergraduate music majors at historically African-American colleges and universities:

        a.) by specific music degree emphasis?

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b.) by instrument/voice?

c.) by gender?

Delimitations

The sample was limited to undergraduate music majors at selected historically African-American colleges and universities who were classified as full-time music majors during the 1994-95 academic school year. Students in the sample were of traditional college age (eighteen through twenty-four) and were enrolled in a minimum of twelve credit hours or the full-time equivalence required at each participating institution.

According to the guidelines and regulations for using the Myers-Briggs Type Indicator, the investigator administered by the test at the various sites. Participating institutions were selected from the College Music Society *Directory* for 1990-92. Historically African-American institutions without music programs or with less than twenty music majors were eliminated from consideration. The CMS Directory listed sixteen historically African-American institutions with more than twenty minority students majoring in music. The investigator narrowed the list to schools that were accessible in his geographical region. Those schools with over twenty music majors were contacted about participating in the study. The schools that accepted were Prairie View A & M University, Texas Southern University, Southern University, Jackson State University, Norfolk State, and Virginia State University.

Two forms were constructed to gather information from participating institutions and students. One form was sent to chairpersons of music departments asking if their students could be included in this study and if permission could be granted to have students fill out information sheets prior to the administration of the test. Also, departments were asked to check state rules and regulations to insure that they could authorize student testing of this sort. The second form, a student information sheet, asked for general information including major applied area, degree classification, grade point average, and gender.

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The researcher traveled to each participating institution to administer the fifty-minute MBTI and obtain academic and personal profile information on test participants. Department chairpersons at participating schools designated a faculty member who assisted with filling out information sheets and in obtaining grade-point-averages. After forms and testing were completed, the researcher graded the tests and reported participant results to each institution.

Analytical Procedures

Results from this investigation were reported in the form of type tables such as those in the *Manual* and the research dissertations reviewed. Tables were constructed for gender, degree plan (Bachelor of Music Education and Bachelor of Music), and instrumental group or voice. All tables include the number of persons and percentage of responses for each of the sixteen possible types as well as all single and double letter combinations. Data in this study were analyzed using Chi-Square and Fisher's Exact Probability (FEPT) tests as well as the Self-Selection Ratio (SSR) (reported as I on tables). Chi-Square is used to determine if the observed frequencies exceed the expected frequencies. In other words one uses Chi-Square to determine if the number of persons in any one of the sixteen personality types differs, significantly, from the predictions in CAPT's databank on African-Americans. Some limitations do apply in statistical procedures and when the number of persons in any given type cell is below five, MBTI researchers at CAPT recommend using FEPT instead because it was created to analyze differences in very small numbers. The Self-Selection Ratio is a common statistical artifact of computer generated analysis that tells CAPT personnel if the number of persons in given personality type is important (defined as an SSR above 1.00). While SSRs are important to personality researchers, the significance levels determined by Chi-Square or Fisher's Exact Probability Test are the important statistical indications in this study.

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Administration of the MBTI

The researcher contacted chairpersons by telephone to arrange test date and time. Most schools elected to set up a table in the main lobby of the music building so that testing procedures and instructions could be explained to students. When preparing to test, emphases were placed on careful completion of information sheets and matching the numbers on response sheets to numbers on the response booklets.[33] Careful consideration was given to the gender designation to insure that the test would be graded properly. The TF questions carry different weights as a function of gender.[34]

The researcher scored the answer sheets manually with stencils obtained from CAPT.[35] Each answer sheet was checked to ensure that one response was given for each question. The only exception being question seventeen which allows for more than one answer. The researcher checked forms and answer sheets to insure that all pertinent information was listed while the student was at the test site. After scoring individual type report forms were mailed to each university for distribution to students. Attached to each student's type sheet was a description of type as stated in the *Manual* chapter "Learning Type through Study of Individual Descriptions."

Summary tables were constructed from information listed on participant response sheets. This allowed for a composite table, gender tables, degree track tables, and separate tables for instrumental and vocal performers. Chi-Square, FEPT percentages and SSRs were calculated for each type table cell and compared to the base population.[36] The author analyzed test responses on the University of Oklahoma mainframe computer using the Statistical Analysis System (SAS).

Answers to the study questions presented in the problem statement are described below:

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[33]Ibid. , p. 9.
[34]Ibid. , p. 8.
[35]Isabel B. Myers and Mary H. McCaulley, Center for Applications of Psychological Type, Inc. Gainsville, Fl.
[36] Isabel B. Myers and Mary H. McCaulley, *Manual: A Guide to the Development and Use of the Myers-Briggs Type Indicator,* 2d ed. (Palo Alto, CA: Consulting Psychologists Press, 1985), p. 140.

1) How does the Myers-Briggs Type Indicator define and differentiate the personality types of undergraduate minority music majors at historically African-American colleges and universities:

a) by specific music degree plan?

Two categories were established for degree plans in this study, the Bachelor of Music (BM) and the Bachelor of Music Education (BME) degree plans. Type tables were constructed for Each concentration, Bachelor of Music or Bacheelor of Music Education, the composite sample and institutional subsamples were compared.

b) by instrument/voice?

Respondents were divided into four areas of applied study, brass, woodwind, voice, keyboard, and percussion. Type tables were constructed for each applied area and comparisons were made from the composite sample.

c) by gender:

The investigator created type tables for males and females according to each institution, woodwind instrument study, and for the composite sample.

CHAPTER II

RELATED LITERATURE

Introduction

The related literature search was based on a microfische and computer-generated reference check reported by the Center for Applications of Psychological Type (CAPT). With the aid of government grants and private donations, CAPT maintains an ongoing project to assemble and update a complete library of published and unpublished works that refer to the Myers-Briggs Type Indicator. The Center for Applications of Psychological Type houses the MBTI data bank used to generate many of the tables for the *Manual*[1] and to locate much of the bibliographical materials for this study. The Jung Institute[2] was also contacted for a computer and microfiche search to determine if materials housed there would be beneficial to this study. The Institute houses materials concerning Carl Jung's theories of personality type as well as some of the materials compiled by Briggs and Myers. The material in this chapter is limited to material written or co-authored by Briggs and Myers as source material for the MBTI, the use of the MBTI with African-American music majors and non-music majors at historically African-American colleges and

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[1]Myers-Briggs Type Indicator Product Catalog, Fall/Winter, 1994. "Center for Applications of Psychological Type, Inc." Gainsville, Florida.
[2]Carl Jung Educational Center located in Houston, Texas, maintains materials of C. Jung and Myers-Briggs.

universities, and MBTI research involving music majors at traditional American colleges and universities.

Literature Written or Co-authored by Isabel Briggs Myers

The most authoritative and reliable document on type is the *Manual: A Guide to the Development and Use of the Myers-Mriggs Type Indicator*[3], second edition, written by Isabel Briggs Myers and Mary H. McCaulley. The manual is divided into eleven sections and an appendix with glossary, sources and description of sample, mean preference scores for MBTI preferences by age groups and types of populations. The introduction gives an overview of C. G. Jung's theory of psychological types and the different ways in which people use perception and judgment. It also describes the administration and scoring of the MBTI and its applications in various settings.[4]

John Black in *Gifts Differing* states that Carl Jung produced the conceptual framework from which Myers organized her study of typology.[5] Myers used Jung's theory to broaden her exploration of type with her children and their classmates serving as her first subjects.[6] Myers had no formal training in psychology or statistics when she began to develop the item pool which would study attitudes, feelings, perceptions and behaviors.[7] The premise behind her work was to continue development of type indicator and to devise a method of making the theory of practical use to everyone.[8]

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[3]Isabel B. Myers and Mary H. McCaulley, *Manual: A Guide to the development and use of the Myers-Briggs Type Indicator*. 2d ed. (Palo Alto, CA: Consulting Psychologists Press, 1985).
[4]Ibid. , p. 1.
[5]*Gifts Differing*, Publisher's Forward. viii.
[6]Ibid. , p. xiv.
[7]Ibid. , p. xiv.
[8]Ibid. , p. xiv.

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MBTI and African-Americans--Research by African-American Authors

One of the earliest efforts to use the MBTI with minority college music majors at

historically African-American institutions was Geraldine Bartee's 1967 study "The

Perceptual Characteristics of Disadvantaged Negro and Caucasian College Students." Her

population consisted of 270 subjects selected from full-time students enrolled at Bishop

College and East Texas State University.[9] The criteria for selection as a disadvantaged

student included: 1) at least one parent had not attained a high school diploma and neither

had gone beyond high school: 2) the family income qualified them for financial aid

according to U.S. Department of Education specifications.[10]

Bartee concluded that personality differences were based on environment and

learning rather than MBTI type.[11] The Tennessee Self-Concept Scale which was also

administered indicated that both the disadvantaged and control group students exhibited low

self esteem.[12] Bartee's findings support previous evidence found in studies of young

disadvantaged African-American children concerning freedom from self blame,

defensiveness, and readiness to blame others for their difficulties but contradicted the

presence of these characteristics in disadvantaged White children.[13]

Wanda M. Johnson's study was based on the premise that students differ in the

ways they learn. In "A Comparative Analysis of Learning Styles of Black and White

College Freshmen," learning styles research focused on group differences such as race and

gender.[14] Her participants were one hundred African-American freshmen and ninety-eight

White freshmen enrolled in four south central United States state-supported universities.

All the participants were enrolled in English Composition I classes.[15] Student learning

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[9]Bartee, Abstract, n.p.
[10]Ibid. , n.p.
[11]Ibid. , n.p.
[12]Ibid. . n.p.
[13]Ibid. . n.p.
[14]Johnson. p. 1.
[15]Ibid. . p. 50.

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styles were determined by scores on the Learning Styles Inventory.[16] Johnson's findings support the notion that the perceptual processes of African-Americans differ from other groups.[17]

Johnson's study found African-American children to be more feeling oriented and people oriented as well as more proficient in non-verbal communication than Caucasian children.[18] Johnson noted that student achievement at the predominately African-American universities was higher than that of their counterparts at predominantly White institutions.[19]

Joseph Gaston in his study, "A Comparison of the Personality Characteristics of Northern and Midwestern Urban Afro-American Freshmen, Southern Town and Rural Afro-American Freshmen, and Southern Afro-American College Student Personnel Staff" administered The California Psychological Inventory (CPI), the Tennessee Self Concept Scale (TSCS) and the MBTI to forty-seven northern midwestern African-American freshmen and sixty-three southern African-American freshmen enrolled at a southern African-American liberal arts college. The thirty-three student personnel staff members were employed at the same institution.[20] Gaston postulated that the racial identity of students in minority colleges and characteristics unique to their particular areas of residence would influence their behavior patterns.[21] He proposed that these factors brought about the differences in personality orientation and the kinds of interpersonal relationships that are possible in an institution's programs and activities.[22] After testing the results indicated that where students and personnel staff were reared did not make significant differences in personality types as defined by the MBTI.

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[16]Ibid. , p. 96.
[17]Ibid. , p. 36.
[18]Ibid. , p. 8.
[19]Ibid. , p. 9.
[20]Ibid. , n.p.
[21]Ibid. , p. 2.
[22]Ibid. , p. 2.

Gaston argued that schools need knowledge of student personalities in order to enhance the resources necessary to facilitate institutional planning.[23] Hopefully through such planning the historical structures, traditions, laws, folkways, and patterns of thought can be challenged and changed.[24] His comparisons noted differences between African-Americans and Whites and African-Americans living in northern urban centers.[25] Few studies at the time were concerned with the factors involved with intraracial differences, intersectional differences, and positive aspects of personality.[26]

Gaston quotes Karon[27] in his study of northern and southern African-Americans:

> The direct effects of discrimination on the Negro are low self-esteem and anger at the way he is treated. Both of these lead to fear which may be manifested in self-abnegation, caution, and apologetic behavior. His low self-esteem may be reflected in unrealistically high aspirations. It may also be manifested by apathy, hedonism, living for the moment, or turning to a life of crime.The anger is denial and irritability. This denial of hostility also leads to passivity and resigned acceptance, to not meeting problems head on.[28]

Karon's findings were based on psychoanalytic interveiws with twenty five African-American subjects using the Thematic Apperception Tests. Karon went on to further test African-American children, [29] concluding with the following deduction:

> No matter which northern sample and which southern sample we had compared, the basic hypothesis would have been confirmed that the caste sanctions have an effect upon personality, and that the differences between the North and South is reflected by appreciable differences in personality structures of Negroes.[30]

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[23]Ibid. , p. 5.
[24]Ibid. , p. 5.
[25]Ibid. , p. 6.
[26]Ibid. , p. 6.
[27]Bertram P. Karon. *The Negro Personality.* New York: Springer Publishing Company, 1938.
[28]Op. Cit. , p. 26.
[29]Gaston, p. 27.
[30]Ibid. , p. 27.

James Kenneth Hill in "A Comparison of Myers-Brigss Types Among Black and White Technical Clinical Laboratory Personnel," noted that, in 1973, many clinical laboratory personnel positions were available and the number of persons trained in these areas would need to be expanded.[31] Because of this, significant numbers of openings would exist for minorities because they were under-represented.[32] Of the seventy three Florida State medical technology students tested with the MBTI, fifty per cent indicated tendencies for extroversion while forty nine per cent indicated tendencies toward introversion. Sensing and feeling were the preferences that occured most frequently.[33] Most medical students tend to be sensing.[34]

The Edwards Personal Preference Schedule used in a study that Hill reviewed, revealed that African-American college students scored higher in organizing their work and arranging their lives systematically than White students. This correlated significantly with the sensing-judging combination measured by MBTI. The sensing dimension was found to be more developed among African-Americans than Whites.[35]

The predominantly African-American medical teaching center used in this investigation was the Howard University-Freedmen Hospital. The predominantly White medical teaching center was the University of Florida Shands Teaching Hospital. The MBTI was given to laboratory personnel to complete during their free time. The African-American population clustered at ISTJ and ESTJ, while the White population types were unevenly dispersed across all sixteen categories.[36] The data support the findings that as jobs require an increased amount of theory and innovative procedures and become more

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[31] James K. Hill, "A Comparison of Myers-Briggs Types Among Black and White Technical Clinical laboratory Personnel." Doctoral diss. University of Florida. 1974, p. 2.
[32] Ibid. , p. 2.
[33] Ibid. , p. 14.
[34] Ibid. , p. 15.
[35] Ibid. , p. 16.
[36] Ibid. , p. 124.

complex, they become more attractive to intuitive types. Hill concluded that intuitive types would be highest among medical technologists.[37]

Levy and Murphy's study "Personality Types Among Negro College Students" examined a population of 758 African-American undergraduates (311 males, 447 females) enrolled in courses at Howard University.[38] The White males were freshmen at Amherst College and the White females were freshmen at Pembroke College. It should be noted that the African-American students tested were of all academic classes with emphasis on lower-division students. College year, and academic major were found to be unrelated to type.

The results in this investigation were found to be stable in eighty eight per cent of the subjects when retested. The findings of the test-retest of the Howard male sample were compared to forty one Amherst freshmen after retest. Approximately one-fourth of the Howard male sample categorized as ESTJ, as compared to nine per cent of the White male sample.[39] The Howard African-American females were found to be one fourth SFJ's, while the major types found among Pembroke White females were NFP's.[40]

The Howard University students, male and female were more often sensing and judging types. Males in general are likely to be extroverted, sensing, thinking, and judging when compared to females. The African-American females on the other hand are more often sensing and judging types when compared with White males.[41]

There are major considerations with comparative studies utilizing minorities. Because of the historical and contemporary restrictions of opportunities for African-Americans, traditional measures of socioeconomic status cannot describe comparable distributions among African-American and White samples.[42]

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[37]Ibid. , p. 165.
[38]Levy. p. 643 - 644.
[39]Ibid. , p. 645.
[40]Ibid. , p. 646.
[41]Ibid. , p. 646.
[42]Ibid. , p. 648.

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Levy suggested in "Personality Types Among Negro College Students" that the dimensions of the MBTI are more stable than indicated by previous research. Further work extending construct validation of Jungian typology and of the MBTI would seem highly promising and worthwhile.[43]

MBTI and Music Majors--Research at Traditional Institutions

Barbara Henderson used students from eight North Carolina two and four year institutions in her study, "Music Major Matriculants In North Carolina Colleges and Universities: Their Personality Types as Measured by the Myers-Briggs Type Indicator." Subgroup analysis of the 190 participants included comparisons by gender. degrees pursued, and vocal/instrumental concentrations.[44] Comparisons were made with the general population by using norms provided by the University of North Carolina at Greensboro freshmen class of 4,832.[45] The study was limited to determining dominant psychological types according to selected institutions.[46] The subjects were all music majors in a proportionally stratified sampling of North Carolina's four-year independent, four year public, two year independent, and two year public institutions that offer music degrees.[47]

Henderson was able to obtain statistical calculations from CAPT[48] in scoring the test. Fifty-two Selection Ratio Type Tables were computed for all groups showing all members of each group under their type.[49] The results of Henderson's findings were compared to the population of musicians in the CAPT Data Bank and to the base population

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[43]Ibid. , p. 652.
[44]Henderson, p. 58.
[45]Ibid. , p. 58.
[46]Ibid. , p. 78.
[47]Ibid. , p. 78.
[48]Center for Applications of Psychological Type, Inc.   Gainesville, Florida. Computer scoring for the Myers-Briggs Type Indicator.
[49]Op. Cit. , p. 58.

from the University of North Carolina (Greensboro). She divided the sample into subgroups of females, males, and degree area.[50]

Alice Lanning's study "Personality Characteristics of Undergraduate Music Majors in Selected Oklahoma Universities: An Investigation of Relationships as Measured by the Myers-Briggs Type Indicator," used a sample of 285 males and 322 females from seven Oklahoma universities. Students tested had to be of average college age (18-24) and enrolled as full-time, music degree students.[51]

Myers predicted that the most prominent personality types in American adult populations would be ESTJ (Males) and ESFJ (Females). Lanning did not confirm those predictions.[52] Analysis indicated distinct type clusters or differences by institution, degree plan, performance emphasis, and by gender.[53] The male and female comparison base predicted that males were ENFP, a type which differed on three of the four scales from the expected type of ESTJ.[54]

The males in Lanning's study differed at each institution from the CAPT comparison base model. Special note was made of the fact that males in all the state-supported universities shared preferences for both N and P, while males at the two private schools with religious afilliation preferred S and J.[55]

Carolyn Gibbons research "The Personality of the Performing Musician as Measured by the Myers-Briggs Type Indicator and Reported Presence of Musical Performance Anxiety," used 110 subjects ranging in age from eighteen to sixty years of age. The mean age for the study was twenty nine. The majority of the subjects were males from Arkansas. Sixty-eight per cent of the sample population were instrumentalists and the

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[50]Ibid. , p. 79.
[51]Lanning, p. 225.
[52]Ibid. , p. 226.
[53]Ibid. , Dissertation Abstracts.
[54]Op. Cit. , p. 227.
[55]Ibid. , p. 229.

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remainder were vocalists and pianists.[56] All the subjects were given the MBTI, the State

Trait Anxiety Scale as a measure of anxiety specific to musical performance before an

audience, and the Performance Anxiety Scale as a second measure of musical performance

anxiety.[57] The number of subjects by area was thirty one professional musicians, thirty

semi-professional musicians and forty nine students.[58] The performing musicians clustered

within the INFP type of MBTI. The sample also clustered within the IN combinations.

Students majoring in music showed a higher incidence of performance anxiety than did the

professional and semi-professional groups.[59]

Thomas M. Wubbenhorst studied "Personality Characteristics of Music Educators

and Performers as Measured by the Myers-Briggs Type Indicator and the Bem Sex-Role

Inventory." His purpose was to examine and compare personality characteristics of music

educators and music performers in an effort to learn more about the persons who selected

music education or performance as careers. Each group's sample was fifty six participants

from prominent graduate schools of music.[60] His findings indicated no significant

difference between the groups on the four dimensions of the MBTI. The study concluded

that musicians who were educators and musicians who were performers were more alike

than different regarding personality type.[61]

Laura J. Parker investigated job satisfaction of 150 Maryland public school band

directors in her dissertation, "The Relationship Between Personality Factors and Job

Satisfaction in Public School Band Directors." In investigating selected personality factors,

[56]Carolyn F. Gibbons. "The Personality of the Performing Musician as measured by the Myers-Briggs Type Indicator and Reported Presence of Musical Performance Anxiety." Doctoral diss. University of Arkansas. 1990, p. 28.
[57]Ibid. , p. 43-44.
[58]Ibid. , p. 44.
[59]Ibid. , p. 44.
[60]Thomas M. Wubbenhorst, "Personality Characteristics of Music Educators and Performers as Measured by the Myers-Briggs Type Indicator and the Bem Sex-Role Inventory." Doctoral diss. University of Missouri - Columbia. 1992, p. ii.
[61]Ibid. , p. 47.

anxiety was the only individual personality factor to significantly affect job satisfaction. Job satisfaction was rated from most to least at elementary school, middle school, and high school, respectively.[62]

John A. Venesile investigated personality characteristics of elementary music teachers with the MBTI in "The Relationship Among Personality Characteristics, Self-Esteem, and Music Teaching Behaviors in Prospective Elementary Classroom Teachers." The twenty six elementary education majors comprising the sample were all enrolled in Music for Elementary Education, a required methods course at Western Campus of Cuyahoga Community College in Parma, Ohio.[63] The elementary music teachers were asked to take the MBTI and the Coopersmith Self-Esteem Inventory. Each participant was given a permission slip for study participation and for videotaping their classroom performance.[64] The participants were twenty two White females and four White males with a mean age of twenty four.[65] Of the twenty six subjects tested, seven were ESFJ. This is also the most frequently reported personality type among elementary teachers as reported by Myers and McCaulley in the MBTI manual.[66]

The review of literature surveyed for this study indicated that music major personality types clustered differently than the normal population. Lanning's observed ENFP type among White students was different than CAPT's projected ESTJ. Equally, Levy and Murphy found that African-American students differed from their White counterparts at medical school. While the number of studies utilizing African-American

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[62]Laura Parker. "The Relationship Between Personality Factors and Job Satisfaction in Public School Band Directors." Doctoral diss. University of Kansas. 1991.

[63]John A. Venesile, "The Relationship Among Personality Characteristics, Self-Esteem, and Music Teaching Behaviors in Prospective Elementary Classroom Teachers." Doctoral diss. Case Wastern Reserve University. 1992, p. 29.

[64]Ibid. , p. 31.

[65]Ibid. , p. 31.

[66] Isabel B. Myers and Mary H. McCaulley. *Manual: A Guide to the Development and use of the Myers-Briggs Type Indicator*, 2d ed. (Palo Alto, CA Consulting Psychologists Press, 1985).

students is limited, indications are that personality differences do exist. Since no studies provided information about MBTI personality types and undergraduate African-American music majors, reasons exist to assume that their personality types would differ from their White counterparts. Yet, insufficient information is available to defend or reject that hypothesis.

CHAPTER III

RESULTS, ANALYSIS, AND INTERPRETATION

Data obtained in this investigation are presented in the form of tables representing MBTI personality types. These tables are grouped by gender, degree plan, and applied area of study. The tables follow the format used in the CAPT *Manual*.[1] Tables present subscales of the MBTI such as E, I, S, N, ET, EF, IF, IT, and dominant trait categories S, N, T, or F. Frequency percentages are presented for each of the sixteen types, single letter categories, and the various two-letter combinations. The frequencies and percentages are compared to the MBTI base population of traditional age college students. The comparison data are from the *Atlas of Type* compiled by CAPT in 1985. Chi-Square and Fisher's Exact Probability are computed using CAPT's *Selection Ratio Type Table For the MacIntosh*.

The Composite Research Sample

145 students, seventy-three males and seventy-two females, at six traditionally African-American institutions of higher learning comprise the research sample. All participating schools are state supported and authorized to grant degrees in music. Students majoring in music are enrolled in both upper and lower division classes.

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[1] Isabel B. Myers and Mary H. McCaulley, *Manual: A Guide to the Development and Use of the Myers-Briggs Type Indicator*, 2d ed. (Palo Alto, CA: Consulting Psychologists Press, 1985).

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Table 4: *Composite Sample*

	BM	BME
Freshmen:	13	42
Sophomores:	13	26
Juniors:	14	20
Seniors	5	12
Totals (Percentages)	45 (31.0%)	100 (69.0%)

Table 4 indicates that the total number of students enrolled in the Bachelor of Music degree plan (BM) is forty-five (31.0%) and the number in the Bachelor of Music Education (BME) degree plan is 100 (69.0%). Of the 145 students enrolled fifty one (35.17%) juniors and seniors are classified as upper division students.

In examining the composite sample MBTI types listed in Table 5, the cell with the greatest number is ESTJ ($N = 33$) at 22.76%. ISTP ($N= 13$) follows at 8.97% and ISTJ ($N= 12$) at 8.28%. Thinking types are 67.59% of the sample while feeling types are 32.41%. In the double-letter combinations, those showing prominence are SJ and TJ at 44.14%, ST at 42.76% and Tdom. at 42.07%.

Table 6 includes the Self Selection Ratios (listed as I). SSRs above 1.0 show a positive self-selection ratio. Positive SSRs occur in the following cells: INFJ (1.48), INTJ (2.07), ISTP (2.00), INTP (1.15), ENTP (2.82), ESTJ (2.15), and ENTJ (1.25). Significant differences between the composite sample and CAPT's base population were determined by Chi Square analysis or by the Fisher's Exact Probability (FEPT). The analytical program determined the number and percentage of persons in each cell and for every double and single letter combination. If the responses in a cell are five or less, the analytical program selects FEPT rather than Chi Square. One additional caution must be noted: significance levels may occur when the number in a given cell is greater or lesser than the base population. Within the composite sample, significant types are INTJ at p.=05, ISTP at p.=01, and ESTJ at p.=001. Significant single letters are T at p.=001

Table 5: *Composite Sample*

N = 145

ISTJ	ISFJ	INFJ	INTJ
N = 12	N = 10	N = 7	N = 11
% = 8.28	% = 6.90	% = 4.83	% = 7.59
ISTP	ISFP	INFP	INTP
N = 13	N = 5	N = 3	N = 7
% = 8.97	% = 3.45	% = 2.07	% = 4.83
ESTP	ESFP	ENFP	ENTP
N = 4	N = 3	N = 8	N = 10
% = 2.76	% = 2.07	% = 5.52	% = 6.90
ESTJ	ESFJ	ENFJ	ENTJ
N = 33	N = 9	N = 2	N = 8
% = 22.76	% = 6.21	% = 1.38	% = 5.52

	N	%
E	77	53.10
I	68	46.90
S	89	61.38
N	56	38.62
T	98	67.59
F	47	32.41
J	92	63.45
P	53	36.55
IJ	40	27.59
IP	28	19.31
EP	25	17.24
EJ	52	35.86
ST	62	42.76
SF	27	18.62
NF	20	13.79
NT	36	24.83
SJ	64	44.14
SP	25	17.24
NP	28	19.31
NJ	28	19.31
TJ	64	44.14
TP	34	23.45
FP	19	13.10
FJ	28	19.31
IN	28	19.31
EN	28	19.31
IS	40	27.59
ES	49	33.79
ET	27	18.62
EF	6	8.21
IF	9	12.32
IT	31	42.46
S dom.	29	20.00
N dom.	36	24.83
T dom.	61	42.07
F dom.	19	13.10

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Table 6: *Composite Sample with SSR*

ISTJ	ISFJ	INFJ	INTJ
N=12	N=10	N=7	N=11
%=8.28	%=6.90	%=4.83	%=7.59
I=0.87	I=0.80	I=1.48	I=2.07
ISTP	**ISFP**	**INFP**	**INTP**
N=13	N=5	N=3	N=7
%=8.97	%=3.45	%=2.07	%=4.83
I=2.00	I=0.69	I=0.38	I=1.15
ESTP	**ESFP**	**ENFP**	**ENTP**
N=4	N=3	N=8	N=10
%=2.76	%=2.07	%=5.52	%=6.90
I=0.60	I=0.32	I=0.60	I=2.82
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N=33	N=9	N=2	N=8
%=22.76	%=6.21	%=1.38	%=5.52
I=2.15	I=0.59	I=0.29	I=1.25

Base Population N= 27,156. Groups are independent.

Calculated values of Chi Square *or* <u>Fisher's Exact Probability (underlined)</u>.

Type table significance

0.24	0.57	1.12	6.22*
6.76+	<u>0.45</u>	<u>0.10</u>	0.14
0.33	<u>0.04</u>*	<u>2.34</u>	1.06
<u>22.37</u>#	<u>2.93</u>	<u>0.07</u>	0.41

E	0.42	IJ	0.49	SJ	1.40	IN	0.74
I	0.42	IP	0.00	SP	0.99	EN	1.38
S	0.13	EP	5.01*	NP	1.69	IS	0.00
N	0.13	EJ	2.01	NJ	1.05	ES	0.14
T	25.78#	ST	12.84#	TJ	18.16#	Sd	5.99*
F	25.78#	SF	9.95#	TP	2.52	Nd	1.18
J	3.70	NF	6.63+	FP	12.78#	Td	26.84#
P	3.70	NT	5.68*	FJ	4.67*	Fd	12.31#

Significance Level
* p<.05
+ p<.01
# p<.001

	N	%	I
E	77	53.10	0.95
I	68	46.90	1.06
S	89	61.38	1.02
N	56	38.62	0.96
T	98	67.59	1.45
F	47	32.41	0.61
J	92	63.45	1.14
P	53	36.55	0.82
IJ	40	27.59	1.10
IP	28	19.31	1.01
EP	25	17.24	0.68
EJ	52	35.86	1.18
ST	62	42.76	1.47
SF	27	18.62	0.61
NF	20	13.79	0.61
NT	36	24.83	1.43
SJ	64	44.14	1.12
SP	25	17.24	0.84
NP	28	19.31	0.81
NJ	28	19.31	1.19
TJ	64	44.15	1.57
TP	34	23.45	1.28
FP	19	13.10	0.50
FJ	28	19.31	0.71
IN	28	19.31	1.16
EN	28	19.31	0.82
IS	40	27.59	1.00
ES	49	33.79	1.05
S dom.	29	20.00	0.68
N dom.	36	24.83	1.17
T dom.	61	42.07	1.78
F dom.	19	13.10	0.51

and F at p.=001 while Table 5: significant double letters are ST at p.=001, SF at p.=01. NF at p.=01, .01, NT at p.=05, TJ at p.=001, FP at. p.=001, Sdom at p.=05, Tdom at p.=001, and Fdom at p.=001.

Tables with Self Selection Ratio omit the double-letter combinations ET, EF, IF and IT. This allows those tables to be in agreement with those listed in the *Manual* and CAPT publications.

Composite Sample: Males

Thirty-two of the males are freshmen, twenty-three are sophomores, ten are juniors, and eight are seniors (N = 73). Upper division students (juniors and seniors) represent approximately 25% of the male sample.

Table 7: *Composite Males*

	BM	BME
Freshmen:	12	20
Sophomores:	4	19
Juniors:	1	9
Seniors:	0	8
Totals (Percentage)	17(24%)	56(76%)

Table 7 summarizes the academic classification of males in the research sample. Review of the table indicates that the total number of males enrolled in the Bachelor of Music degree plan is seventeen (24%) and Bachelor of Music Education degree is fifty-six (76%). Of the seventy-three males enrolled in a music degree plan, eighteen (23%) are classified as upper division.

In Table 8, the cell with the largest number is ESTJ (N = 14) at 19.17%. Second is ISTP with 16.43% followed by ISTJ and INTJ at 10.9%. Thinking types are 79.45% of the sample while feeling types are 20.55%, a difference of more than 50% between the

Table 8: *Composite - Males*

ISTJ	ISFJ	INFJ	INTJ
N = 8	N = 3	N = 4	N = 8
% = 10.9	% = 4.1	% = 5.47	% = 10.9
ISTP	ISFP	INFP	INTP
N = 12	N = 1	N = 1	N = 3
% = 16.43	% = 1.36	% = 1.36	% = 4.10
ESTP	ESFP	ENFP	ENTP
N = 2	N = 1	N = 1	N = 6
% = 2.73	% = 1.36	% = 1.36	% = 8.21
ESTJ	ESFJ	ENFJ	ENTJ
N = 14	N = 3	N = 1	N = 5
% = 19.17	% = 4.10	% = 1.36	% = 6.84

	N	%
E	33	45.21
I	40	54.79
S	44	60.27
N	29	39.73
T	58	79.45
F	15	20.55
J	46	63.01
P	27	36.99
IJ	23	31.51
IP	17	23.29
EP	10	13.70
EJ	23	31.51
ST	36	49.32
SF	8	10.96
NF	7	9.59
NT	22	30.14
SJ	28	38.36
SP	16	21.92
NP	11	15.07
NJ	18	24.66
TJ	35	47.95
TP	23	31.51
FP	4	5.48
FJ	11	15.07
IN	16	21.92
EN	13	17.81
IS	24	32.88
ES	20	27.40
ET	27	36.98
EF	6	8.21
IF	9	12.32
IT	31	42.46
S dom.	14	19.18
N dom.	19	26.03
T dom.	34	46.58
F dom.	6	8.22

Table 9: *Male Composite with SSR*

ISTJ N=8 %=10.96 I=0.88	ISFJ N=3 %=4.11 I=0.76	INFJ N=4 %=5.48 I=2.07	INTJ N=8 %=10.96 I=2.03
ISTP N=12 %=16.44 I=2.42	ISFP N=1 %=1.37 I=0.33	INFP N=1 %=1.37 I=0.26	INTP N=3 %=4.11 I=0.62
ESTP N=2 %=2.74 I=0.41	ESFP N=1 %=1.37 I=0.31	ENFP N=1 %=1.37 I=0.22	ENTP N=6 %=8.22 I=1.21
ESTJ N=14 %=19.18 I=1.50	ESFJ N=3 %=4.11 I=0.75	ENFJ N=1 %=1.37 I=0.46	ENTJ N=5 %=6.85 I=1.19

Base Population N= 12,637. Groups are independent.

Calculated values of Chi Square *or* Fisher's Exact Probability (underlined).

Type table significance			
0.15	0.80	0.13	4.36*
10.54#	0.37	0.19	0.49
0.24	0.26	0.09	0.24
2.63	0.80	0.53	0.80

E	1.04	IJ	1.16	SJ	0.15	IN	0.17
I	1.04	IP	0.01	SP	0.00	EN	0.67
S	0.13	EP	4.34*	NP	3.81	IS	0.58
N	0.13	EJ	0.74	NJ	3.18	ES	0.14
T	8.07+	ST	3.37	TJ	4.12*	Sd	3.43
F	8.07+	SF	3.31	TP	0.78	Nd	1.07
J	2.92	NF	2.97	FP	0.00	Td	7.05+
P	2.92	NT	1.21	FJ	0.11	Fd	4.60*

	N	%	I
E	33	45.21	0.88
I	40	54.79	1.12
S	44	60.27	1.04
N	29	39.73	0.95
T	58	79.45	1.25
F	15	20.55	0.56
J	46	63.01	1.19
P	27	36.99	0.79
IJ	23	31.51	1.21
IP	17	23.29	1.02
EP	10	13.70	0.57
EJ	23	31.51	1.17
ST	36	49.32	1.27
SF	8	10.96	0.57
NF	7	9.59	0.56
NT	22	30.14	1.23
SJ	28	38.36	1.06
SP	16	21.92	1.00
NP	11	15.07	0.60
NJ	18	24.66	1.47
TJ	35	47.95	1.31
TP	23	31.51	1.17
FP	4	5.48	0.27
FJ	11	15.07	0.91
IN	16	21.92	1.10
EN	13	17.81	0.82
IS	24	32.88	1.14
ES	20	27.40	0.93
S dom.	14	19.18	0.66
N dom.	19	26.03	1.23
T dom.	34	46.58	1.45
F dom.	6	8.22	0.46

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poles. The introvert, sensing, and judgment types dominate their poles with the respective percentages: 54.79%, 60.27% and 63.01%. According to CAPT predictions,[2] male African-American music majors shouldbe around 60% thinking types. In the sample, thinking types exceed that prediction by more than 19%.

In Table 9 positive SSRs are present in the following cells: INFJ (2.07), INTJ (2.03), ISTP (2.42), ENTP (1.21), ESTJ (1.50), and ENTJ (1.19). Significant types are ISTP at p.=001 and INTJ at p.=05. Significant single-letters are T at p.=01 and F at p.=01; significant double letters are EP at p.=05, TJ at p.=05, Tdom at p.=01, and Fdom at p.=05. In the double-letter combinations, the percentages are closely distributed. ST types are 49.32%, TJ types are 47.95%, SJ types are 38.36%, Tdom. are 46.58%, and IT types are 42.46% (Table 8). CAPT predicted that the majority of the sample males would be extroverts (62.67%). The introverts, however, are 54.79% of the sample. True to CAPT predictions, thinking types are strongly represented at 79.45% of the sample. Judgment types are the next most frequent at 63.01%.

Composite Sample: Females

Twenty-three females are freshmen, sixteen are sophomores, twenty-four are juniors and nine are seniors (N=72). Upper division students comprised approximately 45% of the female students. Their academic degrees are as follows:

Table 10: *Composite Females*

	BM	BME
Freshmen:	1	22
Sophomores:	9	7
Juniors:	13	11
Seniors:	5	4
Total (Percentages)	28 (39%)	44 (61%)

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[2] Mary H. McCaulley and Gerald P. MacDaid, *Cross-Cultural Data Compared to United States Data - A Sample of Selected MBTI Data*, (Gainesville, Florida: The Center for Aplication of Psychological Type), no page number.

In Table 10 twenty-eight (39%) females are enrolled in the Bachelor of Music degree plan and forty-four (61%) in the Bachelor of Music Education.

Table 11 summarizes the female composite sample MBTI frequencies. Review of the table indicates that the greatest percentage (26.39%) occurs in the personality type ESTJ followed by those with 9.72% of the sample, ISFJ and ENFP. The ESFJ followed with 8.33%. The greatest single-letter difference between the female sample and CAPT predictions is in the category judgment vs. perception (63.89% and 36.11%). This compares to CAPT's 52.21% (judgment) and 47.79% (perception)[3] In single-letter categories, the E is 61.11%, sensing is 62.5%, T is 55.56%, and J is 63.89% of the sample. CAPT's sensing trait prediction is 34.56% for musicians.[4] This sample agrees with CAPT predictions. The majority of the females in the sample use judgment which is consistent with the predicted 52.21%.[5]

In double-letter combinations, SJ has the largest percentage (50.0%) approximately ten percentage points above the next group. The EJ, TJ, and ES are all reported as 40.27% of the sample. Sensing and judgment are dominant in double-letter groupings. According to CAPT, females should be over-represented by F types. This sample, however, is represented by a high concentration of T types (40) at 55.56%, S types (45) at 62.50% and J types (46) at 63.89%. According to CAPT the types most represented by music students are INFJ, INFP, ENFP, ESFJ andENFJ. In this sample INFJ is 4.17%, INFP is 2.78%, ENFP is 9.72%, ESFJ is 8.33% and ENFJ is 1.39%.

Table 12 includes Self Selection Ratios for the composite females. Positive SSRs are noted in the following cells: INFJ (1.10), INTJ (1.93), INTP (2.65), ENTP (1.59),

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[3] Ibid. , p. 252.
[4] Ibid. , p. 248.
[5] Ibid. , p. 252.

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Table 11: *Composite Females*

ISTJ N = 4 % = 5.56	ISFJ N = 7 % = 9.72	INFJ N = 3 % = 4.17	INTJ N = 3 % = 4.17
ISTP N = 1 % = 1.39	ISFP N = 4 % = 5.56	INFP N = 2 % = 2.78	INTP N = 4 % = 5.56
ESTP N = 2 % = 2.78	ESFP N = 2 % = 2.78	ENFP N = 7 % = 9.72	ENTP N = 4 % = 5.56
ESTJ N = 19 % = 26.39	ESFJ N = 6 % = 8.33	ENFJ N = 1 % = 1.39	ENTJ N = 3 % = 4.17

	N	%
E	44	61.11
I	28	38.89
S	45	62.50
N	27	37.50
T	40	55.56
F	32	44.44
J	46	63.89
P	26	36.11
IJ	17	23.61
IP	11	15.28
EP	15	20.83
EJ	29	40.28
ST	26	36.11
SF	19	26.39
NF	13	18.06
NT	14	19.44
SJ	36	50.00
SP	9	12.50
NP	17	23.61
NJ	10	13.89
TJ	29	40.28
TP	11	15.28
FP	15	20.83
FJ	17	23.61
IN	12	16.67
EN	15	20.83
IS	16	22.22
ES	29	40.28
ET	27	38.88
EF	16	22.22
IF	16	22.22
IT	12	16.66
S dom.	15	20.83
N dom.	17	23.61
T dom.	27	37.50
F dom.	13	18.06

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Table 12: *Female Composite with SSR*

ISTJ N=4 %=5.56 I=0.81	ISFJ N=7 %=9.72 I=0.85	INFJ N=3 %=4.17 I=1.10	INTJ N=3 %=4.17 I=1.93
ISTP N=1 %=1.39 I=0.57	ISFP N=4 %=5.56 I=0.97	INFP N=2 %=2.78 I=0.49	INTP N=4 %=5.56 I=2.65
ESTP N=2 %=2.78 I=0.99	ESFP N=2 %=2.78 I=0.33	ENFP N=7 %=9.72 I=0.83	ENTP N=4 %=5.56 I=1.59
ESTJ N=19 %=26.39 I=3.04	ESFJ N=6 %=8.33 I=0.55	ENFJ N=1 %=1.39 I=0.22	ENTJ N=3 %=4.17 I=1.29

Base Population N = 14,519. Groups are independent.

Calculated values of Chi Square *or* Fisher's exact probability (underlined).

Type table significance

0.82	0.22	1.00	0.41
0.73	1.00	0.33	0.07
1.00	0.13	0.28	0.52
28.10#	2.53	0.09	0.73

E	0.05	IJ	0.02	SJ	1.86	IN	0.53
I	0.05	IP	0.02	SP	2.15	EN	0.63
S	0.04	EP	1.14	NP	0.01	IS	0.68
N	0.04	EJ	1.53	NJ	0.16	ES	0.92
T	18.63#	ST	10.17#	TJ	16.15#	SJ	2.57
F	18.63#	SF	6.00*	TP	1.45	NJ	0.25
J	1.14	NF	3.28	FP	3.77	Td	22.97#
P	1.14	NT	5.22*	FJ	5.31*	Fd	7.14+

	N	%	I
E	44	61.11	1.02
I	28	38.89	0.97
S	45	62.50	1.02
N	27	37.50	0.97
T	40	55.56	1.75
F	32	44.44	0.65
J	46	63.89	1.11
P	26	36.11	0.85
IJ	17	23.61	0.97
IP	11	15.28	0.96
EP	15	20.83	0.79
EJ	29	40.28	1.21
ST	26	36.11	1.74
SF	19	26.39	0.65
NF	13	18.06	0.65
NT	14	19.44	1.77
SJ	36	50.00	1.19
SP	9	12.50	0.65
NP	17	23.61	1.03
NJ	10	13.89	0.89
TJ	29	40.28	1.92
TP	11	15.28	1.41
FP	15	20.83	0.66
FJ	17	23.61	0.64
IN	12	16.67	1.22
EN	15	20.83	0.84
IS	16	22.22	0.84
ES	29	40.28	1.16
S dom.	15	20.83	0.71
N dom.	17	23.61	1.11
T dom.	27	37.50	2.28
F dom.	13	18.06	0.55

ESTJ (3.04), and ENTJ (1.29). The only significant type is ESTJ at p.=001. Single-letters that are significant are T at p.=001 and F at p.=001; significant double-letters are ST at p.=001, SF at p.=05, NT at p.=05, TJ at p.=001, FJ at p.=05, Tdom at p.=001, and Fdom at p.=01.

Individual Institution Subsamples

In an effort to illustrate the differences between males and females at their respective institutions, the composite sample was broken down into gender-based subsamples for each school. In all instances the number of persons in any given MBTI cell was so low that Fisher's Exact Probability test was used. A notation is made when Chi Square was used, but otherwise all of the following references to signficance refer to calculations based on FEPT.

School A - Males

Table 13 summarizes information for male students at School A. Academic classification is distributed as eight freshmen, three sophomores, three juniors, and seven seniors. Juniors and seniors represent approximately forty-three percent of the male sample.

Table 13: *School A Males*

	BM	BME
Freshmen:	3	5
Sophomore:	1	2
Junior:	0	3
Senior:	1	6
Total (Percentages)	5 (23%)	16 (77%)

The Bachelor of Music area consists of five students while there are sixteen music education majors. 20% of the Bachelor of Music students are classified as upper division while 56% of the music education majors are classified as upper division. In the type table cell numbers for School A males (Table 14) ENTP and ISTP (N = 4) each have 19.05% of the subsample. This compares to 8.21% for ENTP and 16.43% for ISTP from the type composite for males (Table 8).

Chart 1: *Type Comparison of Male Composite and School A Males*

N	Male composite		School A Males	N
8	10.90	ISTJ	9.52	2
3	4.10	ISFJ	9.52	2
8	10.90	INTJ	14.29	3
12	16.43	ISTP	19.05	4
1	1.36	INFP	4.76	1
3	4.10	INTP	4.76	1
2	2.73	ESTP	4.76	1
6	8.21	ENTP	19.05	4
14	19.17	ESTJ	9.52	2
3	4.10	ESFJ	4.76	1

Table 14: *School A Males*

ISTJ	ISFJ	INFJ	INTJ
N = 2	N = 2	N = 0	N = 3
% = 9.52	% = 9.52	% = 0	% = 14.29
ISTP	ISFP	INFP	INTP
N = 4	N = 0	N = 1	N = 1
% = 19.05	% = 0	% = 4.76	% = 4.76
ESTP	ESFP	ENFP	ENTP
N = 1	N = 0	N = 0	N = 4
% = 4.76	% = 0	% = 0	% = 19.05
ESTJ	ESFJ	ENFJ	ENTJ
N = 2	N = 0	N = 0	N = 1
% = 9.52	% = 0	% = 0	% = 4.76

	N	%
E	8	38.10
I	13	61.90
S	11	52.38
N	10	47.62
T	18	85.71
F	3	14.29
J	10	47.62
P	11	52.38
IJ	7	33.33
IP	6	28.57
EP	5	23.81
EJ	3	14.29
ST	9	42.86
SF	2	9.52
NF	1	4.76
NT	9	42.86
SJ	6	28.57
SP	5	23.81
NP	6	28.57
NJ	4	19.05
TJ	8	38.10
TP	10	47.62
FP	1	4.76
FJ	2	9.52
IN	5	23.81
EN	5	23.81
IS	8	38.10
ES	3	14.29
ET	8	38.10
EF	0	0.00
IF	3	14.29
IT	10	47.62
S dom.	5	23.81
N dom.	7	33.33
T dom.	8	38.10
F dom.	1	4.76

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Table 15: *School A Males with SSR*

ISTJ N=2 %=9.52 I=0.76	ISFJ N=2 %=9.52 I=1.72	INFJ N=0 %=0.00 I=0.00	INTJ N=3 %=14.29 I=2.64
ISTP N=4 %=19.05 I=2.80	**ISFP** N=0 %=0.00 I=0.00	**INFP** N=1 %=4.76 I=0.90	**INTP** N=1 %=4.76 I=0.72
ESTP N=1 %=4.76 I=0.71	**ESFP** N=0 %=0.00 I=0.00	**ENFP** N=0 %=0.00 I=0.00	**ENTP** N=4 %=19.05 I=2.82
ESTJ N=2 %=9.52 I=0.74	**ESFJ** N=0 %=0.00 I=0.00	**ENFJ** N=0 %=0.00 I=0.00	**ENTJ** N=1 %=4.76 I=0.82

Base Population N= 12,637. Groups are independent.

Calculated values of Chi Square *or* Fisher's exact probability (underlined).

Type table significance			
0.77	0.63	0.67	0.10
0.05*	0.63	1.00	1.00
1.00	0.62	0.40	0.05*
0.76	0.41	0.66	1.00

E	1.44	IJ	0.59	SJ	0.53	IN	0.78
I	1.44	IP	1.39	SP	1.00	EN	1.00
S	0.29	EP	1.00	NP	0.14	IS	0.88
N	0.29	EJ	0.23	NJ	1.00	ES	0.15
T	4.50*	ST	0.14	TJ	0.02	Sd	0.64
F	0.04	SF	0.29	TP	4.56*	Nd	1.89
J	0.24	NF	0.16	FP	0.10	Td	0.35
P	0.24	NT	3.78	FJ	0.56	Fd	0.16

	N	%	I
E	8	38.10	0.74
I	13	61.90	1.27
S	11	52.38	0.90
N	10	47.62	1.14
T	18	85.71	1.35
F	3	14.29	0.39
J	10	47.62	0.90
P	11	52.38	1.11
IJ	7	33.33	1.28
IP	6	28.57	1.25
EP	5	23.81	0.99
EJ	3	14.29	0.53
ST	9	42.86	1.10
SF	2	9.52	0.49
NF	1	4.76	0.28
NT	9	42.86	1.74
SJ	6	28.57	0.79
SP	5	23.81	1.08
NP	6	28.57	1.14
NJ	4	19.05	1.13
TJ	8	38.10	1.04
TP	10	47.62	1.77
FP	1	4.76	0.24
FJ	2	9.52	0.58
IN	5	23.81	1.19
EN	5	23.81	1.09
IS	8	38.10	1.32
ES	3	14.29	0.49
S dom.	5	23.81	0.82
N dom.	7	33.33	1.58
T dom.	8	38.10	1.19
F dom.	1	4.76	0.27

When comparing School A Males to the composite sample, the composite's only INFP type is at School A and more than half the ISFJs and half the ESTPs are at School A. The ISTPs at School A are one third of the composite. Introverts constitute 61.90% of the subsample while thinking is preferred by 85.71% of the subjects. Perception (52.38%) and sensing (52.38%) types are closely distributed near 50%. Of the double-letter combinations, TP and IT represent the largest percentage with 47.62% followed by ST and NT with 42.86%. According to CAPT base population predictions for musicians one should find a greater frequency of extroverts and intuitive types when testing college music students. School A students do not agree.[6] Types suggested by CAPT for music majors are INFJ, INFP, ENFP. ESFJ, and ENFJ.[7] Only the INFP sample listing agrees with that prediction. Table 15 shows the Self Selection Ratios when School A males are compared to the base population. Positive SSRs are noted in the following cells: ISFJ (1.72), INTJ (2.64), ISTP (2.80), and ENTP (2.82). The only significant types are ISTP at p.=.05 and ENTP at p=.05. The only significant single-letter is T at p.=05; the one double-letter combination is TP at p.=05.

School A - Females

Table 16 summarizes data for female students at School A. Academic classification is distributed as two freshmen, two sophomores, seven juniors, and three seniors. Juniors and seniors represent approximately 71% of the female sample. 71% of School A females are upper division students compared to 37.5% in the composite. School A also lists the majority of music students enrolled in the Bachelor of Music degree plan (75%).

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[6] Isabel B Myers and Mary H. McCaulley. *Manual: A Guide to the development and use of the Myers-Briggs Type Indicator.* 2d ed. (Palo Alto. CA: Consulting Psychologists Press, 1985). p. 190.
[7] *Manual.* p. 110.

Table 16: *School A Females*

	BM	BME
Freshmen:	1	1
Sophomore:	2	0
Junior:	4	3
Senior:	2	1
Totals (Percentage)	9 (65%)	5 (35%)

The Bachelor of Music area has nine students while there are five music education majors. Of the fourteen females tested 80% of the music education majors and 66% of the bachelor of music majors are classified as upper division.

The type table cell numbers for School A females (Table 17) are relatively small. The largest cell type for School A females is ESTJ (N = 3) with 21.43% of the sample. This compares favorably to 26.39% of the ESTJ type listed in Table 11 of the female composite. The ISTJ, ISFJ, INFJ, INTJ, INFP, INTP, and ESTP are all listed at 7.14%. Six cells have no subjects. The single-letter thinking and judgment categories are both 64.29% of the School A subsample. Extroversion and intuition both list at 57.14%. Of the double-letter combinations, TJ represents the largest cell with 50%. The ET and T dom. follows with 42.86%. The EJ, ST and SJ are all listed as 35.71%. According to CAPT base population predictions, a greater frequency of F types should occur. The female composite and School A sample percentages for F are both below 50%.

Table 17: *School A Females*

ISTJ	ISFJ	INFJ	INTJ
N = 1	N = 1	N = 1	N = 1
% = 7.14	% = 7.14	% = 7.14	% = 7.14
ISTP	ISFP	INFP	INTP
N = 0	N = 0	N = 1	N = 1
% = 0	% = 0	% = 7.14	% = 7.14
ESTP	ESFP	ENFP	ENTP
N = 1	N = 0	N = 2	N = 0
% = 7.14	% = 0	% = 14.29	% = 0
ESTJ	ESFJ	ENFJ	ENTJ
N = 3	N = 0	N = 0	N = 2
% = 21.43	% = 0	% = 0	% = 14.29

	N	%
E	8	57.14
I	6	42.86
S	6	42.86
N	8	57.14
T	9	64.29
F	5	35.71
J	9	64.29
P	5	35.71
IJ	4	28.57
IP	2	14.29
EP	3	21.43
EJ	5	35.71
ST	5	35.71
SF	1	7.14
NF	4	28.57
NT	4	28.57
SJ	5	35.71
SP	1	7.14
NP	4	28.57
NJ	4	28.57
TJ	7	50.00
TP	2	14.29
FP	3	21.43
FJ	2	14.29
IN	4	28.57
EN	4	28.57
IS	2	14.29
ES	4	28.57
ET	6	42.86
EF	2	14.29
IF	3	21.43
IT	3	21.43
S dom.	3	21.43
N dom.	4	28.57
T dom.	6	42.86
F dom.	1	7.14

Table 18: *School A Females with SSR*

ISTJ	ISFJ	INFJ	INTJ
N=1	N=1	N=1	N=1
%=7.14	%=7.14	%=7.14	%=7.14
I=1.04	I=0.62	I=1.89	I=3.30
ISTP	**ISFP**	**INFP**	**INTP**
N=0	N=0	N=1	N=1
%=0.00	%=0.00	%=7.14	%=7.14
I=0.00	I=0.00	I=1.26	I=3.41
ESTP	**ESFP**	**ENFP**	**ENTP**
N=1	N=0	N=2	N=0
%=7.14	%=0.00	%=14.29	%=0.00
I=2.54	I=0.00	I=1.22	I=0.00
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N=3	N=0	N=0	N=2
%=21.43	%=0.00	%=0.00	%=14.29
I=2.47	I=0.00	I=0.00	I=4.42

Base Population N = 14,519. Groups are independent.

Calculated values of Chi Square *or* <u>Fisher's exact probability (underlined)</u>.

Type table significance			
1.00	<u>0.72</u>	1.00	<u>0.26</u>
<u>1.00</u>	<u>0.63</u>	<u>1.00</u>	<u>0.26</u>
<u>0.33</u>	<u>0.40</u>	<u>1.00</u>	<u>1.00</u>
<u>0.12</u>	<u>0.15</u>	<u>0.62</u>	<u>0.07</u>

E	0.04	IJ	<u>0.76</u>	SJ	<u>0.79</u>	IN	<u>0.11</u>
I	0.04	IP	<u>1.00</u>	SP	<u>0.33</u>	EN	<u>0.76</u>
S	2.03	EP	<u>0.77</u>	NP	<u>0.75</u>	IS	<u>0.38</u>
N	2.03	EJ	<u>1.00</u>	NJ	<u>0.26</u>	ES	<u>0.78</u>
T	6.81+	ST	<u>0.19</u>	TJ	7.13+	Sd	<u>0.58</u>
F	<u>0.01</u>	SF	<u>0.01</u>	TP	<u>1.00</u>	Nd	<u>0.51</u>
J	0.25	NF	<u>1.00</u>	FP	<u>0.57</u>	Td	7.08+
P	<u>0.79</u>	NT	<u>0.06</u>	FJ	<u>0.10</u>	Fd	<u>0.05</u>

	N	%	I
E	8	57.14	0.96
I	6	42.86	1.07
S	6	42.86	0.70
N	8	57.14	1.48
T	9	64.29	2.02
F	5	35.71	0.52
J	9	64.29	1.11
P	5	35.71	0.84
IJ	4	28.57	1.18
IP	2	14.29	0.90
EP	3	21.43	0.81
EJ	5	35.71	1.07
ST	5	35.71	1.72
SF	1	7.14	0.18
NF	4	28.57	1.03
NT	4	28.57	2.60
SJ	5	35.71	0.85
SP	1	7.14	0.37
NP	4	28.57	1.24
NJ	4	28.57	1.83
TJ	7	50.00	2.39
TP	2	14.29	1.32
FP	3	21.43	0.68
FJ	2	14.29	0.39
IN	4	28.57	2.08
EN	4	28.57	1.15
IS	2	14.29	0.54
ES	4	28.57	0.82
Sdom.	3	21.43	0.73
Ndom.	4	28.57	1.35
Tdom.	6	42.86	2.60
Fdom.	1	7.14	0.22

Chart 2: *Type Comparison of Female Composite and School A Females*

N	Female Composite		School A Females	N
4	5.56	ISTJ	7.14	1
7	9.72	ISFJ	7.14	1
3	4.17	INFJ	7.14	1
3	4.17	INTJ	7.14	1
2	2.78	INFP	7.14	1
4	5.56	INTP	7.14	1
2	2.78	ESTP	7.14	1
7	9.72	ENFP	14.29	2
19	26.39	ESTJ	21.43	3
3	4.17	ENTJ	14.29	2

Chart 2 compares composite and School A females. Seven of School A females cells have one listing each. The ENTJ cell has two of the three listings found in the composite. Fifty percent of composite INFP and ESTP types are School A females. The ESTJ cell is the largest percentage for the female composite (26.39%) as well as for School A females (21.43%). ENFP (N = 2) and ESTJ (N = 3) are the prominent cell types for School A females.

SSRs between School A females (N = 14) and the female base composite are found in Table 18. The following cells indicate a positive SSR: ISTJ (1.04), INFJ (1.89), INFP (1.26), INTJ (3.30), INTP (3.41), ESTP (2.54), ENFP (1.22), ESTJ (2.47), and ENTJ (4.42). Of the cells showing positive SSRs six have one subject listed. Those cells with more than one subject and positive SSR are ENFP (N = 2), ESTJ (N = 3) and ENTJ (N = 2). The E trait is common to the three cells with more than one subject (ENFP, ESTJ,and ENTJ). Two cells have three letters in common ETJ (ESTJ and ENTJ). The only significant single-letter is T at p.=01; the double letters are TJ at p.=01 and Tdom at p.=01.

School B - Males

Table 19 summarizes the MBTI data for male students at School B. Academic classification is distributed as two freshmen, six sophomores, two juniors, and one senior. Juniors and seniors represent approximately 27% of the male sample. Areas of academic concentration are:

Table 19: *School B Males*

	BM	BME
Freshmen:	0	2
Sophomore:	1	5
Junior:	1	1
Senior:	0	1
Total (Percentages)	2 (19%)	9 (81%)

The Bachelor of Music area consists of two students while there are nine music education majors. Twenty-two percent of the music education majors are classified as upper division. Fifty percent of the bachelor of music majors are classified as upper division.

Chart 3: *Type Comparison of Male Composite and School B Males*

	Male Composite			School B Males	
N					N
8	10.90	ISTJ	18.18		2
3	4.10	ISFJ	18.18		2
12	16.43	ISTP	18.18		2
14	19.17	ESTJ	18.18		2

The largest cell types for School B males are ISTJ, ISFJ, ISTP and ESTJ (Chart 3). Each cell has 18.18% of the male population. Composite male predictions are 10.96% ISTJ, 4.11% ISFJ, 16.44% ISTP and 19.18% ESTJ respectively. All the male composite percentages except ESTJ are lower than the School B Males composite percentages. Nine cells from have no subjects. Those cells with one subject list as 9.09% of the sample. Clearly numbers this small make comparisons very difficult and highly suspect. They are

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Table 20: *School B Males*

ISTJ	ISFJ	INFJ	INTJ
N = 2	N = 2	N = 1	N = 1
% = 18.18	% = 18.18	% = 9.09	% = 9.09
ISTP	ISFP	INFP	INTP
N = 2	N = 0	N = 0	N = 0
% = 18.18	% = 0	% = 0	% = 0
ESTP	ESFP	ENFP	ENTP
N = 0	N = 1	N = 0	N = 0
% = 0	% = 9.09	% = 0	% = 0
ESTJ	ESFJ	ENFJ	ENTJ
N = 2	N = 0	N = 0	N = 0
% = 18.18	% = 0	% = 0	% = 0

	N	*%*
E	3	27.27
I	8	72.73
S	9	81.82
N	2	18.18
T	7	63.64
F	4	36.36
J	8	72.73
P	3	27.27
IJ	6	54.55
IP	2	18.18
EP	1	9.09
EJ	2	18.18
ST	6	54.55
SF	3	27.27
NF	1	9.09
NT	1	9.09
SJ	6	54.55
SP	3	27.27
NP	0	0.00
NJ	2	18.18
TJ	5	45.45
TP	2	18.18
FP	1	9.09
FJ	3	27.27
IN	2	18.18
EN	0	0.00
IS	6	54.55
ES	3	27.27
ET	2	18.18
EF	1	9.09
IF	3	27.27
IT	5	45.45
S dom.	5	45.45
N dom.	2	18.18
T dom.	4	36.36
F dom.	0	0.00

Table 21: *School B Males with SSR*

ISTJ N=2 %=18.18 I=1.46	ISFJ N=2 %=18.18 I=3.43	INFJ N=1 %=9.09 I=3.43	INTJ N=1 %=9.09 I=1.68
ISTP N=2 %=18.18 I=2.67	ISFP N=0 %=0.00 I=0.00	INFP N=0 %=0.00 I=0.00	INTP N=0 %=0.00 I=0.00
ESTP N=0 %=0.00 I=0.00	ESFP N=1 %=9.09 I=2.06	ENFP N=0 %=0.00 I=0.00	ENTP N=0 %=0.00 I=0.00
ESTJ N=2 %=18.18 I=1.42	ESFJ N=0 %=0.00 I=0.00	ENFJ N=0 %=0.00 I=0.00	ENTJ N=0 %=0.00 I=0.00

Base Population N = 12,637. Groups are dependent.

Calculated values of Chi Square *or* Fisher's exact probability (underlined).

	N	%	I
E	3	27.27	0.53
I	8	72.73	1.49
S	9	81.82	1.41
N	2	18.18	0.44
T	7	63.64	1.00
F	4	36.36	0.99
J	8	72.73	1.37
P	3	27.27	0.58
IJ	6	54.55	2.10
IP	2	18.18	0.80
EP	1	9.09	0.67
EJ	2	18.18	0.67
ST	6	54.55	1.41
SF	3	27.27	1.41
NF	1	9.09	0.53
NT	1	9.09	0.37
SJ	6	54.55	1.51
SP	3	27.27	1.24
NP	0	0.00	0.00
NJ	2	18.18	1.08
TJ	5	45.45	1.25
TP	2	18.18	0.68
FP	1	9.09	1.65
FJ	3	27.27	1.65
IN	2	18.18	0.91
EN	0	0.00	0.00
IS	6	54.55	1.89
ES	3	27.27	0.93
Sdom.	5	45.45	1.57
Ndom.	2	18.18	0.86
Tdom.	4	36.36	1.14
Fdom.	0	0.00	0.00

Type table significance

0.64	0.12	0.26	1.00
0.17	1.00	0.66	0.63
0.63	0.39	0.64	0.63
0.64	0.66	1.00	0.65

E	0.14	IJ	4.66*	SJ	1.60	IN	1.00
I	2.51	IP	0.75	SP	0.72	EN	0.14
S	2.52	EP	0.32	NP	0.08	IS	3.55
N	0.14	EJ	0.74	NJ	1.00	ES	1.00
T	0.00	ST	1.15	TJ	0.76	Sd	0.32
F	1.00	SF	0.70	TP	0.74	Nd	1.00
J	1.72	NF	0.70	FP	0.48	Td	1.00
P	0.24	NT	0.31	FJ	0.41	Fd	0.23

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presented here for consistency in data reporting. In single-letter categories, introverts of School B males are 72.73% of the sample while the sensing are 81.82%. The thinking category makes up 63.64% of the sample, and judgment makes up 72.72%. The judgment trait is present in five cells while the sensing, introvert, and feeling traits are common in three of the cells in various combinations. According to CAPT the T and J traits should be less than their opposite poles. Double-letter combinations at the same percentage number are IJ, ST, IS and SJ, all at 54.55%. The only cell from School B males (Table 21) to match the CAPT predictions is INFJ. Those cells listing a positive self-selection (above 1.0) are ESFP (2.06), ISFJ (3.43), ISTJ (1.46), INFJ (3.43), INTJ (1.68) and ESTJ (1.42). The only significance in this subsample is in the double letter IJ at . 05.

School B - Females

Table 22 consists of data for female students at School B. Academic classification is distributed as five freshmen, five sophomores, six juniors, and two seniors. Juniors and seniors represent approximately 44% of the female sample. Areas of academic concentration are:

Table 22: *School B Females*

	BM	BME
Freshmen:	1	4
Sophomore:	3	2
Junior:	1	5
Senior:	1	1
Total (Percentages)	6 (34%)	12 (66%)

The Bachelor of Music area has six students while there are twelve music education majors. Fifty per cent of the music education majors are classified as upper division. Thirty-three percent of the bachelor of music majors are classified as upper division. The type table cell numbers for School B females (Table 23) are relatively small. The largest cell is ESTJ (N = 5) having 27.78% of the sample. This compares to 26.39% for ESTJ types (Chart 2) in the female composite. Other cell types for School B females that have more than one listing are ESFP, INTP and ESFJ (N = 2) at 11.11% and ENFP (N = 3) at 16.67%. Six cells have no subjects and no cell has over five subjects.

Chart 4: *Type Comparison of Female Composite and School B Females*

Female Composite		School B Females		
N				N
4	5.56	INTP	11.11	2
2	2.78	ESFP	11.11	2
19	26.39	ESTJ	27.78	5
6	8.33	ESFJ	11.11	2

In the base population of females, CAPT predicted that ESTJ would dominate. This is supported in part by the fact that E is 77.78% of the sample. Sensing is 61.11% of the sample and CAPT predicted 75%. The thinking and feeling categories are equally divided at 50%. Double-letter combinations with the highest percentage are the SJ and ES, both listed at 50.00% followed by EJ and EF (44.44%) and T dom. (38.89%). Cells listing a positive self-selection ratio are INTP (5.31), ESFP (1.33), ENFP (1.42), ENTP (1.59), and ESTJ (3.20). The extrovert trait is present in each cell with positive SSRs except INTP. The feeling and perception traits are common to two of the cells ESFP and ENFP. The two significant types are ESTJ at p.=02 and INTP at p.=05. Only one double letter is significant at p.=05.

Table 23: *School B Females*

ISTJ N = 1 % = 5.56	ISFJ N = 1 % = 5.56	INFJ N = 0 % = 0	INTJ N = 0 % = 0
ISTP N = 0 % = 0	ISFP N = 0 % = 0	INFP N = 0 % = 0	INTP N = 2 % = 11.11
ESTP N = 0 % = 0	ESFP N = 2 % = 11.11	ENFP N = 3 % = 16.67	ENTP N = 1 % = 5.56
ESTJ N = 5 % = 27.78	ESFJ N = 2 % = 11.11	ENFJ N = 1 % = 5.56	ENTJ N = 0 % = 0

	N	%
E	14	78.78
I	4	22.22
S	11	61.11
N	7	38.89
T	9	50.00
F	9	50.00
J	10	55.56
P	8	44.44
IJ	2	11.11
IP	2	11.11
EP	6	33.33
EJ	8	44.44
ST	6	33.33
SF	5	27.78
NF	4	22.22
NT	3	16.67
SJ	9	50.00
SP	2	11.11
NP	6	33.33
NJ	1	5.56
TJ	6	33.33
TP	3	16.67
FP	5	27.78
FJ	4	22.22
IN	2	11.11
EN	5	27.78
IS	2	11.11
ES	9	50.00
ET	6	33.33
EF	8	44.44
IF	1	5.56
IT	3	16.67
S dom.	4	22.22
N dom.	4	22.22
T dom.	7	38.89
F dom.	3	16.67

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Table 24: *School B Females with SSR*

ISTJ N=1 %=5.56 I=0.8	ISFJ N=1 %=5.56 I=0.48	INFJ N=0 %=0.00 I=0.00	INTJ N=0 %=0.00 I=0.00
ISTP N=0 %=0.00 I=0.00	ISFP N=0 %=0.00 I=0.00	INFP N=0 %=0.00 I=0.00	INTP N=2 %=11.11 I=5.31
ESTP N=0 %=0.00 I=0.00	ESFP N=2 %=11.11 I=1.33	ENFP N=3 %=16.67 I=1.42	ENTP N=1 %=5.56 I=1.59
ESTJ N=5 %=27.78 I=3.20	ESFJ N=2 %=11.11 I=0.74	ENFJ N=1 %=5.56 I=0.87	ENTJ N=0 %=0.00 I=0.00

Base Population N = 14,519. Groups are dependent.

Calculated values of Chi Square *or* Fisher's exact
probability (underlined).

	Type table significance		
1.00	0.52	0.65	1.00
1.00	0.43	0.43	0.05*
0.69	1.00	0.71	1.00
0.02*	0.76	1.00	0.67

E	2.43	IJ	0.27	SJ	0.47	IN	1.00
I	0.15	IP	0.76	SP	0.55	EN	0.79
S	0.00	EP	0.45	NP	1.08	IS	0.18
N	0.00	EJ	0.99	NJ	0.34	ES	1.81
T	2.75	ST	1.71	TJ	1.67	Sd	0.61
F	2.75	SF	0.34	TP	0.44	Nd	1.00
J	0.03	NF	0.79	FP	0.81	Td	6.57*
P	0.03	NT	0.44	FJ	0.23	Fd	0.21

	N	%	I
E	14	77.78	1.30
I	4	22.22	0.55
S	11	61.11	1.00
N	7	38.89	1.01
T	9	50.00	1.57
F	9	50.00	0.73
J	10	55.56	0.96
P	8	44.44	1.05
IJ	2	11.11	0.46
IP	2	11.11	0.76
EP	6	33.33	1.26
EJ	8	44.44	1.33
ST	6	33.33	1.60
SF	5	27.78	0.68
NF	4	22.22	0.80
NT	3	16.67	1.52
SJ	9	50.00	1.19
SP	2	11.11	0.57
NP	6	33.33	1.45
NJ	1	5.56	0.36
TJ	6	33.33	1.59
TP	3	16.67	1.54
FP	5	27.78	0.88
FJ	4	22.22	0.61
IN	2	11.11	0.81
EN	5	27.78	1.12
IS	2	11.11	0.42
ES	9	50.00	1.43
Sdom.	4	22.22	0.75
Ndom.	4	22.22	1.05
Tdom.	7	38.89	2.36
Fdom.	3	16.67	0.51

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School C - Males

Table 25 consists of data for males at School C. Academic classification is

distributed as three freshmen, four sophomores, and no juniors and seniors. Areas of

academic concentration are:

Table 25: *School C Males*

	BM	BME
Freshmen:	1	2
Sophomore:	1	3
Junior:	0	0
Senior:	0	0
Total (Percentages)	2 (28%)	5 (72%)

The Bachelor of Music area consists of two students while there are five music

education majors. None of the subjects classify as upper division. The type table cell

numbers for School C males (Table 26) are relatively small. The largest cell for School C

males (Chart 5) is ISTJ. This cell has 42.86% of the School C sample. Twelve cells have

no subjects. The two cells with one subject, ENFJ and ENTJ, are 14.29% of the sample.

Chart 5: *Type Comparison of Male Composite and School C Males*

N	Male Composite		School C Males		N
8	10.90	ISTJ	42.86		3
14	19.17	ESTJ	28.57		2
1	1.36	ENFJ	14.29		1
5	6.84	ENTJ	14.29		1

Interestingly, all of the School C Males utilized judgment. Thinking was the

second most prevalent trait at 85.71% with sensing at 71.43%. CAPT predicted that a

greater percentage of males would be introverted and intuitive. In this subsample E.S.T.

and J all dominate their poles, contradicting expectations. Of the double-letter

combinations, EJ (57.14%), ST (71.43%), SJ (71.43%), TJ (85.71%), IS (42.86%), S

dom. and T dom.(42.86%) all are ten or more percentage points above their corollary trait.

Table 26: *School C Males*

ISTJ N = 3 % = 42.86	ISFJ N = 0 % = 0	INFJ N = 0 % = 0	INTJ N = 0 % = 0
ISTP N = 0 % = 0	ISFP N = 0 % = 0	INFP N = 0 % = 0	INTP N = 0 % = 0
ESTP N = 0 % = 0	ESFP N = 0 % = 0	ENFP N = 0 % = 0	ENTP N = 0 % = 0
ESTJ N = 2 % = 28.57	ESFJ N = 0 % = 0	ENFJ N = 1 % = 14.29	ENTJ N = 1 % = 14.29

	N	%
E	4	57.14
I	3	42.86
S	5	71.53
N	2	28.57
T	6	85.71
F	1	14.29
J	7	100.00
P	0	0.00
IJ	3	42.86
IP	0	0.00
EP	0	0.00
EJ	4	57.14
ST	5	71.43
SF	0	0.00
NF	1	14.29
NT	1	14.29
SJ	5	71.43
SP	0	0.00
NP	0	0.00
NJ	2	28.57
TJ	6	85.71
TP	0	0.00
FP	0	0.00
FJ	1	14.29
IN	0	0.00
EN	2	28.65
IS	3	42.86
ES	2	28.57
ET	1	14.29
EF	1	14.29
IF	0	0.00
IT	3	42.86
S dom.	3	42.86
N dom.	0	0.00
T dom.	3	42.86
F dom.	1	14.29

Table 27: School C Males with SSR

ISTJ	ISFJ	INFJ	INTJ
N=3	N=0	N=0	N=0
%=42.86	%0.002	%=0.00	%=0.00
I=13.43	I=0.00	I=0.00	I=0.00
ISTP	**ISFP**	**INFP**	**INTP**
N=0	N=0	N=0	N=0
%=0.00	%=0.00	%=0.00	%=0.00
I=0.00	I=0.00	I=0.00	I=0.00
ESTP	**ESFP**	**ENFP**	**ENTP**
N=0	N=0	N=0	N=0
%=0.00	%=0.00	%=0.00	%=0.00
I=0.00	I=0.00	I=0.00	I=0.00
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N=2	N=0	N=1	N=1
%=28.57	%=0.00	%=14.29	%=14.29
I=2.23	I=0.00	I=4.79	I=2.47

Based Total N= 12637. Groups are independent.

Calculated values of Chi square *or* Fisher's exact probability (underlined).

	Type table significance		
0.05	1.00	1.00	1.00
1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00
0.22	1.00	0.19	0.34

E	1.00	IJ	0.39	SJ	0.11	IN	0.36
I	1.00	IP	0.22	SP	0.22	EN	1.00
S	0.71	EP	0.21	NP	0.20	IS	0.68
N	0.71	EJ	0.09	NJ	0.61	ES	1.00
T	1.50	ST	0.12	TJ	7.32	Sd	0.68
F	0.27	SF	0.36	TP	0.20	Nd	0.36
J	6.20	NF	1.00	FP	0.36	Td	0.69
P	0.02	NT	0.69	FJ	1.00	Fd	1.00

	N	%	I
E	4	57.14	1.12
I	3	42.86	0.88
S	5	71.43	1.23
N	2	28.57	0.68
T	6	85.71	1.35
F	1	14.29	0.39
J	7	100.00	1.89
P	0	0.00	0.00
IJ	3	42.86	1.65
IP	0	0.00	0.00
EP	0	0.00	0.00
EJ	4	57.14	2.11
ST	5	71.43	1.84
SF	0	0.00	0.00
NF	1	14.29	0.83
NT	1	14.29	0.58
SJ	5	71.43	1.97
SP	0	0.00	0.00
NP	0	0.00	0.00
NJ	2	28.57	1.70
TJ	6	85.71	2.35
TP	0	0.00	0.00
FP	0	0.00	0.00
FJ	1	14.29	0.86
IN	0	0.00	0.00
EN	2	28.57	1.31
IS	3	42.86	1.49
ES	2	28.57	0.97
Sdom.	3	42.86	1.48
Ndom.	0	0.00	0.00
Tdom.	3	42.86	1.34
Fdom.	1	14.29	0.80

Positive SSRs (Table 27) are noted in all cells containing subjects. The only significant

type is ISTJ at p.=05. Only one single-letter, J, and one double letter, TJ, were significant

at p.=05 and p.=01 respectively.

School C - Females

Table 28 summarizes the data for female students at School C. Nine cells contain

no subjects and no cell contains more than five. Academic classification is distributed as

seven freshmen, no sophomores, one junior, and no seniors. Areas of academic

concentration are:

Table 28: *School C Females*

	BM	BME
Freshmen:	4	3
Sophomore:	0	0
Junior:	0	1
Senior:	0	0
Totals (%)	4 (50%)	4 (50%)

The Bachelor of Music area has four freshmen students and no sophomore, junior,

or seniors. There are four music education majors, three freshmen, one junior and no

sophomores or juniors. Only 12.5% of the music education majors are classified as upper

division. The largest cell type for School C females is ISTJ (N = 2) at 25.00% of the

sample. This compares to 5.56% kfor the ISTJ type in the female composite (Chart 6).

Chart 6: *Type Comparison of Female Composite and School C Females*

N	Female Composite		School B Females		N
4	5.56	ISTJ	25.00		2
7	9.72	ISFJ	12.50		1
3	4.17	INTJ	12.50		1
2	2.78	ESTP	12.50		1
4	5.56	ENTP	12.50		1
6	8.33	ESFJ	12.50		1
3	4.17	ENTJ	12.50		1

Table 29: *School C Females*

ISTJ	ISFJ	INFJ	INTJ
N = 2	N = 1	N = 0	N = 1
% = 25.00	% = 12.50	% = 0	% = 12.50
ISTP	ISFP	INFP	INTP
N = 0	N = 0	N = 0	N = 0
% = 0	% = 0	% = 0	% = 0
ESTP	ESFP	ENFP	ENTP
N = 1	N = 0	N = 0	N = 1
% = 12.50	% = 0	% = 0	% = 12.50
ESTJ	ESFJ	ENFJ	ENTJ
N = 0	N = 1	N = 0	N = 1
% = 0	% = 12.50	% = 0	% = 12.50

	N	%
E	4	50.00
I	4	50.00
S	5	62.50
N	3	37.50
T	6	75.00
F	2	25.00
J	6	75.00
P	2	25.00
IJ	4	50.00
IP	0	0.00
EP	2	25.00
EJ	2	25.00
ST	3	37.50
SF	2	25.00
NF	0	0.00
NT	3	37.50
SJ	4	50.00
SP	1	12.50
NP	1	12.50
NJ	2	25.00
TJ	4	50.00
TP	2	25.00
FP	0	0.00
FJ	2	25.00
IN	1	12.50
EN	2	25.00
IS	3	37.50
ES	2	25.00
ET	3	37.50
EF	2	25.00
IF	1	12.50
IT	2	25.00
S dom.	4	50.00
N dom.	2	25.00
T dom.	1	12.50
F dom.	1	12.50

Table 30: *School C Females with SSR*

ISTJ N=2 %=25.00 I=3.64	ISFJ N=1 %=12.50 I=1.09	INFJ N=0 %=0.00 I=0.00	INTJ N=1 %=12.50 I=5.78
ISTP N=0 %=0.00 I=0.00	ISFP N=0 %=0.00 I=0.00	INFP N=0 %=0.00 I=0.00	INTP N=0 %=0.00 I=0.00
ESTP N=1 %=12.50 I=4.45	ESFP N=0 %=0.00 I=0.00	ENFP N=0 %=0.00 I=0.00	ENTP N=1 %=12.50 I=3.57
ESTJ N=0 %=0.00 I=0.00	ESFJ N=1 %=12.50 I=0.83	ENFJ N=0 %=0.00 I=0.00	ENTJ N=1 %=12.50 I=3.87

Base Population N = 14,519. Groups are independent.

Calculated values of Chi square *or* <u>Fisher's exact probability (underlined)</u>.

Type table significance
$\frac{0.10}{1.00}$ $\frac{1.00}{1.00}$ $\frac{1.00}{1.00}$ $\frac{0.16}{1.00}$ $\frac{0.20}{0.63}$ $\frac{0.64}{1.00}$ $\frac{0.61}{0.68}$ $\frac{0.25}{0.23}$

E	0.72	IJ	0.10	SJ	0.73	IN	1.00
I	0.72	IP	0.37	SP	0.71	EN	1.00
S	1.00	EP	1.00	NP	0.69	IS	0.69
N	1.00	EJ	0.73	NJ	0.62	ES	0.72
T	6.88+	ST	0.38	TJ	0.07	Sd	0.25
F	0.02	SF	0.49	TP	0.21	Nd	1.00
J	0.99	NF	0.12	FP	0.06	Td	1.00
P	0.48	NT	0.05	FJ	0.72	Fd	0.29

	N	%	I
E	4	50.00	0.84
I	4	50.00	1.24
S	5	62.50	1.02
N	3	37.50	0.97
T	6	75.00	2.36
F	2	25.00	0.37
J	6	75.00	1.30
P	2	25.00	0.59
IJ	4	50.00	2.06
IP	0	0.00	0.00
EP	2	25.00	0.95
EJ	2	25.00	0.75
ST	3	37.50	1.80
SF	2	25.00	0.62
NF	0	0.00	0.00
NT	3	37.50	3.41
SJ	4	50.00	1.19
SP	1	12.50	0.65
NP	1	12.50	0.54
NJ	2	25.00	1.60
TJ	4	50.00	2.39
TP	2	25.00	2.30
FP	0	0.00	0.00
FJ	2	25.00	0.68
IN	1	12.50	0.91
EN	2	25.00	1.00
IS	3	37.50	1.41
ES	2	25.00	0.72
Sdom.	4	50.00	1.70
Ndom.	2	25.00	1.18
Tdom.	1	12.50	0.76
Fdom.	1	12.50	0.38

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In the single-letter distribution (Table 29), extroverts and introverts are both evenly distributed at 50%. Sensing, thinking, and judgment dominate their respective cells by at least twenty or more percentage points over the opposite pole. In double-letter combinations, the SJ, TJ and S dom. are all at 50.00%. SSRs (Table 30) for each cell type with a subject are positive. The highest SSR is 5.78 for INTJ followed by ESTP with 4.45. The only significant result in this subsample is the single-letter T at p.=01.

School D - Males

Table 31 summarizes data for males at School D. Academic classification is distributed at eight freshmen, three sophomores, and no juniors and seniors. Areas of academic concentration are:

Table 31: *School D Males*

	BM	BME
Freshmen:	4	4
Sophomore:	1	2
Junior:	0	0
Senior:	0	0
Totals (%)	5 (45%)	6 (55%)

The Bachelor of Music area consists of five students while there are six music education majors. This subsample, just as with School C Females, has no upper classmen representation. Review of Table 32 indicates the greatest frequency percentage (18.18%) occurs in the personality types ISTP, INTP, ESTJ and ESFJ. All other cells are empty.

Table 32: *School D Males*

					N	%
ISTJ N = 1 % = 9.09	ISFJ N = 0 % = 0	INFJ N = 1 % = 9.09	INTJ N = 1 % = 9.09	E I	4 7	36.36 63.64
				S N	7 4	63.64 36.36
ISTP N = 2 % = 18.18	ISFP N = 0 % = 0	INFP N = 0 % = 0	INTP N = 2 % = 18.18	T F	8 3	72.73 27.27
				J P	7 4	63.64 36.36
ESTP N = 0 % = 0	ESFP N = 0 % = 0	ENFP N = 0 % = 0	ENTP N = 0 % = 0	IJ IP EP EJ	3 4 0 4	27.27 36.36 0.00 36.36
				ST SF NF NT	5 2 1 3	45.45 18.18 9.09 27.27
ESTJ N = 2 % = 18.18	ESFJ N = 2 % = 18.18	ENFJ N = 0 % = 0	ENTJ N = 0 % = 0	SJ SP NP NJ	5 2 2 2	45.45 18.18 18.18 18.18
				TJ TP FP FJ	4 4 0 3	36.36 36.36 0.00 27.27
				IN EN IS ES	4 0 3 4	36.36 0.00 27.27 36.36
				ET EF IF IT	2 2 1 6	18.18 18.18 9.09 54.55
				S dom. N dom. T dom. F dom.	1 2 6 2	9.09 18.18 54.55 18.18

Table 33: *School D Males with SSR*

ISTJ	ISFJ	INFJ	INTJ
N=1	N=0	N=1	N=1
%=9.09	%=0.00	%=9.09	%=9.09
I=0.73	I=0.00	I=3.43	I=1.68
ISTP	**ISFP**	**INFP**	**INTP**
N=2	N=0	N=0	N=2
%=18.18	%=0.00	%=0.00	%=18.18
I=2.67	I=0.00	I=0.00	I=2.74
ESTP	**ESFP**	**ENFP**	**ENTP**
N=0	N=0	N=0	N=0
%=0.00	%=0.00	%=0.00	%=0.00
I=0.00	I=0.00	I=0.00	I=0.00
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N=2	N=2	N=0	N=0
%=18.18	%=18.18	%=0.00	%=0.00
I=1.42	I=3.33	I=0.00	I=0.00

Base Population N= 12.637. Groups are independent.

Calculated values of Chi square *or* Fisher's exact probability (underlined).

Type table significance			
1.00	0.66	0.26	1.00
0.17	1.00	0.66	0.16
0.63	1.00	0.64	0.63
0.54	0.12	1.00	0.65

E	0.38	IJ	1.00	SJ	0.54	IN	0.25
I	0.97	IP	0.47	SP	1.00	EN	0.14
S	0.13	EP	0.08	NP	0.74	IS	1.00
N	0.77	EJ	0.50	NJ	1.00	ES	0.74
T	0.41	ST	0.76	TJ	1.00	Sd	0.19
F	0.56	SF	1.00	TP	0.50	Nd	1.00
J	0.50	NF	0.70	FP	0.14	Td	2.56
P	0.64	NT	1.00	FJ	0.41	Fd	1.00

	N	%	I
E	4	36.36	0.71
I	7	63.64	1.30
S	7	63.64	1.09
N	4	36.36	0.87
T	8	72.73	1.15
F	3	27.27	0.75
J	7	63.64	1.20
P	4	36.36	0.77
IJ	3	27.27	1.05
IP	4	36.36	1.59
EP	0	0.00	0.00
EJ	4	36.36	1.35
ST	5	45.45	1.17
SF	2	18.18	0.94
NF	1	9.09	0.53
NT	3	27.27	1.11
SJ	5	45.45	1.26
SP	2	18.18	0.83
NP	2	18.18	0.73
NJ	2	18.18	1.08
TJ	4	36.36	1.00
TP	4	36.36	1.35
FP	0	0.00	0.00
FJ	3	27.27	1.65
IN	4	36.36	1.82
EN	0	0.00	0.00
IS	3	27.27	0.95
ES	4	36.36	1.24
Sdom.	1	9.09	0.31
Ndom.	2	18.18	0.86
Tdom.	6	54.55	1.70
Fdom.	2	18.18	1.02

Chart 7: *Type Comparison of Male Composite and School D Males*

N	Male Composite		School D Males	N
8	10.90	ISTJ	9.09	1
4	5.47	INFJ	9.09	1
8	10.90	INTJ	9.09	1
12	16.43	ISTP	18.18	2
2	4.10	INTP	18.18	2
14	19.17	ESTJ	18.18	2
3	4.10	ESFJ	18.18	2

School D males meet all CAPT's predictions except that the sample contains more introverts (63.64%). CAPT lists sensing in minority males as 58.06%. The sample is close to this percentage with 63.64%. CAPT prediction of the presence of the thinking trait 60.00% is twelve percentage points below tne 72.73% represented in School D Males. The judgment trait at 63.64% of the sample is closer to CAPT predictions of 55-60%.

The double-letter combinations are more evenly distributed for School D Males than other schools. The SJ and ST are 45.45%. Type Table 33 shows the SSRs for School D Males. The cells with above a 1.00 ratio are INFJ, INTJ, ISTP, INTP, ESTJ and ESFJ. INFJ and ESFJ have the highest SSRs (3.43 and 3.33).

School D - Females

Table 34 summarizes the data for female students at School D. Academic classification is distributed as three freshmen, one sophomore, one junior, and one senior. Upper class students represent approximately 33% of the sample. Areas of academic concentration are:

Table 34: *School D Females*

	BM	BME
Freshmen:	1	2
Sophomore:	0	1
Junior:	1	0
Senior:	0	1
Totals (%)	2 (33%)	4 (67%)

The Bachelor of Music area has two students while there are four music education majors. Only 25.00% of the music education majors are classified as upper division. The type table cell numbers for School D Females (Table 35) are relatively small.

Review of the table indicates the highest percentages occuring in cells ISFJ and ISFP at 33.33% each. ENTP and ESTJ are at 16.67% and twelve cells contained no subjects. The greatest difference from the CAPT prediction for single-letter grouping occurs in the category sensing vs. intuition. The base population has a frequency of 60% for sensing and 40% for intuition. The observed frequencies for sensing and intuition for School D are 83.33% and 16.67% respectively. The extroversion and thinking scales are both distributed at 33.33% . Sensing and feeling dominate their perspective cells by thirty or more percent. The feeling option is 66.67% which is in line with CAPT predictions. The judgment and perception traits are both at 50.00%. In double-letter combinations, the IJ, IP, SP, FP, FJ, S dom. and Fdom. are all at 33.33%. The largest percentage double-letter combinations are SF (66.67%) and SJ (50.00%).

Chart 8 compares the numbers and percentages of the female composite to those of School D females. The chart shows that half the composite ISFP's are in this subsample.

Chart 8: *Type Comparison of Female Composite and School D Females*

	Female Composite		School D Females	
N				N
7	9.72	ISFJ	33.33	2
4	5.56	ISFP	33.33	2
4	5.56	ENTJ	16.67	1
19	26.39	ESTJ	16.67	1

The highest SSR listed from Table 36 is 4.76 in the ENTP cell. The only significant type is ISFP at p.=04. The only significant double letter is IS at p.=05.

Table 35: *School D Females*

ISTJ	ISFJ	INFJ	INTJ
N = 0	N = 2	N = 0	N = 0
% = 0	% = 33.33	% = 0	% = 0
ISTP	ISFP	INFP	INTP
N = 0	N = 2	N = 0	N = 0
% = 0	% = 33.33	% = 0	% = 0
ESTP	ESFP	ENFP	ENTP
N = 0	N = 0	N = 0	N = 1
% = 0	% = 0	% = 0	% = 16.67
ESTJ	ESFJ	ENFJ	ENTJ
N = 1	N = 0	N = 0	N = 0
% = 16.67	% = 0	% = 0	% = 0

	N	%
E	2	33.33
I	4	66.67
S	5	83.33
N	1	16.67
T	2	33.33
F	4	66.67
J	3	50.00
P	3	50.00
IJ	2	33.33
IP	2	33.33
EP	1	16.67
EJ	1	16.67
ST	1	16.67
SF	4	66.67
NF	0	0.00
NT	1	16.67
SJ	3	50.00
SP	2	33.33
NP	1	16.67
NJ	0	0.00
TJ	1	16.67
TP	1	16.67
FP	2	33.33
FJ	2	33.33
IN	0	0.00
EN	1	16.67
IS	4	66.67
ES	1	16.67
ET	2	33.33
EF	0	0.00
IF	4	66.67
IT	0	0.00
S dom.	2	33.33
N dom.	1	16.67
T dom.	1	16.67
F dom.	2	33.33

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Table 36: *School D Females with SSR*

ISTJ	ISFJ	INFJ	INTJ
N=0	N=2	N=0	N=0
%=0.00	%33.33	%=0.00	%=0.00
I=0.00	I=2.91	I=0.00	I=0.00
ISTP	**ISFP**	**INFP**	**INTP**
N=0	N=2	N=0	N=0
%=0.00	%=33.33	%=0.00	%=0.00
I=0.00	I=5.80	I=0.00	I=0.00
ESTP	**ESFP**	**ENFP**	**ENTP**
N=0	N=0	N=0	N=1
%=0.00	%=0.00	%=0.00	%=16.67
I=0.00	I=0.00	I=0.00	I=4.76
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N=1	N=0.	N=0	N=0
%=16.67	%=0.00	%=0.00	%=0.00
I=1.92	I=0.00	I=0.00	I=0.00

Base Population N = 14,519. Groups are independent.

Calculated values of Chi square *or* <u>Fisher's exact probability (underlined)</u>.

		N	%	I
E		2	33.33	0.56
I		4	66.67	1.66
S		5	83.33	1.36
N		1	16.67	0.43
T		2	33.33	1.05
F		4	66.67	0.98
J		3	50.00	0.87
P		3	50.00	1.18
IJ		2	33.33	1.37
IP		2	33.33	2.09
EP		1	16.67	0.63
EJ		1	16.67	0.50
ST		1	16.67	0.80
SF		4	66.67	1.64
NF		0	0.00	0.00
NT		1	16.67	1.52
SJ		3	50.00	1.19
SP		2	33.33	1.72
NP		1	16.67	0.72
NJ		0	0.00	0.00
TJ		1	16.67	0.80
TP		1	16.67	1.54
FP		2	33.33	1.06
FJ		2	33.33	0.91
IN		0	0.00	0.00
EN		1	16.67	0.67
IS		4	66.67	2.51
ES		1	16.67	0.48
Sdom.		2	33.33	1.13
Ndom.		1	16.67	0.79
Tdom.		1	16.67	1.01
Fdom.		2	33.33	1.01

Type table significance			
<u>1.00</u>	<u>0.14</u>	<u>1.00</u>	<u>1.00</u>
<u>1.00</u>	<u>0.04</u>*	<u>1.00</u>	<u>1.00</u>
<u>1.00</u>	<u>1.00</u>	<u>0.62</u>	<u>0.19</u>
<u>1.00</u>	<u>0.60</u>	<u>1.00</u>	<u>1.00</u>

E	<u>0.23</u>	IJ	<u>0.64</u>	SJ	<u>1.00</u>	IN	<u>0.61</u>
I	<u>0.23</u>	IP	<u>0.25</u>	SP	<u>0.60</u>	EN	<u>1.00</u>
S	<u>0.42</u>	EP	<u>0.69</u>	NP	<u>1.00</u>	IS	<u>0.05</u>*
N	<u>0.42</u>	EJ	<u>0.45</u>	NJ	<u>0.60</u>	ES	<u>0.44</u>
T	<u>1.00</u>	ST	<u>1.00</u>	TJ	<u>1.00</u>	Sd	<u>1.00</u>
F	<u>1.00</u>	SF	<u>0.23</u>	TP	<u>1.00</u>	Nd	<u>1.00</u>
J	<u>1.00</u>	NF	<u>0.20</u>	FP	<u>1.00</u>	Td	<u>1.00</u>
P	<u>1.00</u>	NT	<u>1.00</u>	FJ	<u>1.00</u>	Fd	<u>1.00</u>

Table 37 summarizes the data for males at School E. Academic classification is distributed as three freshmen, two sophomores, one junior and no seniors. Areas of academic concentration are:

Table 37: *School E Males*

	BM	BME
Freshmen:	3	0
Sophomore:	0	2
Junior:	0	1
Senior:	0	0
Totals (%)	3 (50%)	3 (50%)

The Bachelor of Music area consists of three students while there are three music education majors. Only one upper classmen music education major (16.66%) can be classified as upper division. The type table cell numbers for School E Males (Table 38) are relatively small. The largest percentage (33.33%) occurs in personality types ISTP and ESTJ. The other two cells with entries ENFP and ENTJ have frequencies of 16.67%. The remaining twelve cells are empty.

Chart 9 compares the numbers and percentages for the male composite to School E Males. The School E Males subsample has the one student listed as ENFP in the male composite.

Chart 9: *Type Comparison of Male Composite and School E Males*

N	Male Composite		School E Males	N
12	16.43	ISTP	33.33	2
1	1.36	ENFP	16.67	1
14	19.17	ESTJ	33.33	2
5	6.84	ENTJ	16.67	1

In single-letter analysis, the greatest difference from the base population occurs in the category thinking vs. feeling. CAPT predicts a frequency for thinking at 67.59% and

Table 38: *School E Males*

					N	%
ISTJ N = 0 % = 0	ISFJ N = 0 % = 0	INFJ N = 0 % = 0	INTJ N = 0 % = 0	E I	4 2	66.67 33.33
				S N	4 2	66.67 33.33
ISTP N = 2 % = 33.33	ISFP N = 0 % = 0	INFP N = 0 % = 0	INTP N = 0 % = 0	T F	5 1	83.33 16.67
				J P	3 3	50.00 50.00
ESTP N = 0 % = 0	ESFP N = 0 % = 0	ENFP N = 1 % = 16.67	ENTP N = 0 % = 0	IJ IP EP EJ	0 2 1 3	0.00 33.33 16.67 50.00
ESTJ N = 2 % = 33.33	ESFJ N = 0 % = 0	ENFJ N = 0 % = 0	ENTJ N = 1 % = 16.67	ST SF NF NT	4 0 1 1	66.67 0.00 16.67 16.67
				SJ SP NP NJ	2 2 1 1	33.33 33.33 16.67 16.67
				TJ TP FP FJ	3 2 1 0	50.00 33.33 16.67 0.00
				IN EN IS ES	0 2 2 2	0.00 33.33 33.33 33.33
				ET EF IF IT	3 1 0 2	50.00 16.67 0.00 33.33
				S dom. N dom. T dom. F dom.	0 1 5 0	0.00 16.67 83.33 0.00

Table 39: *School E Males with SSR*

ISTJ	ISFJ	INFJ	INTJ
N=0	N=0	N=0	N=0
%=0.00	%=0.00	%=0.00	%=0.00
I=0.00	I=0.00	I=0.00	I=0.00
ISTP	**ISFP**	**INFP**	**INTP**
N=2	N=0	N=0	N=0
%=33.33	%=0.00	%=0.00	%=0.00
I=4.90	I=0.00	I=0.00	I=0.00
ESTP	**ESFP**	**ENFP**	**ENTP**
N=0	N=0	N=1	N=0
%=0.00	%=0.00	%=16.67	%=0.00
I=0.00	I=0.00	I=2.66	I=0.00
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N=2	N=0	N=0	N=1
%=33.33	%=0.00	%=0.00	%=16.67
I=2.60	I=0.00	I=0.00	I=2.89

Base Population N= 12,637. Groups are independent.

Calculated values of Chi square *or* <u>Fisher's exact</u>
<u>probability (underlined)</u>.

	N	%	I
E	4	66.67	1.30
I	2	33.33	0.68
S	4	66.67	1.15
N	2	33.33	0.68
T	5	83.33	1.31
F	1	16.67	0.46
J	3	50.00	0.94
P	3	50.00	1.06
IJ	0	0.00	0.00
IP	2	33.33	1.46
EP	1	16.67	0.69
EJ	3	50.00	1.85
ST	4	66.67	1.72
SF	0	0.00	0.00
NF	1	16.67	0.97
NT	1	16.67	0.68
SJ	2	33.33	0.92
SP	2	33.33	1.51
NP	1	16.67	0.67
NJ	1	16.67	0.99
TJ	3	50.00	1.37
TP	2	33.33	1.24
FP	1	16.67	0.83
FJ	0	0.00	0.00
IN	0	0.00	0.00
EN	2	33.33	1.53
IS	2	33.33	1.16
ES	2	33.33	1.13
Sd	0	0.00	0.00
Nd	1	16.67	0.79
Td	5	83.33	2.60
Fd	0	0.00	0.00

Type table significance

<u>0.62</u> <u>1.00</u> <u>1.00</u> <u>1.00</u>
<u>0.06</u> <u>1.00</u> <u>1.00</u> <u>1.00</u>
<u>1.00</u> <u>1.00</u> <u>0.32</u> <u>1.00</u>
<u>0.17</u> <u>1.00</u> <u>1.00</u> <u>0.30</u>

E	<u>0.69</u>	IJ	<u>0.21</u>	SJ	<u>1.00</u>	IN	<u>0.36</u>
I	<u>0.69</u>	IP	<u>0.63</u>	SP	<u>0.62</u>	EN	<u>0.62</u>
S	<u>0.71</u>	EP	<u>1.00</u>	NP	<u>1.00</u>	IS	<u>1.00</u>
N	<u>0.71</u>	EJ	<u>0.35</u>	NJ	<u>1.00</u>	ES	<u>1.00</u>
T	<u>0.43</u>	ST	<u>0.22</u>	TJ	<u>0.67</u>	Sd	<u>0.19</u>
F	<u>0.43</u>	SF	<u>0.37</u>	TP	<u>1.00</u>	Nd	<u>1.00</u>
J	<u>1.00</u>	NF	<u>1.00</u>	FP	<u>1.00</u>	Td	<u>0.01+</u>
P	<u>1.00</u>	NT	<u>1.00</u>	FJ	<u>0.60</u>	Fd	<u>0.38</u>

feeling at 32.62% while the sample has thinking at 83.33% and feeling at 16.67%. The remaining single-letter categories are in line with the base population predictions. In keeping with CAPT predictions extroversion, sensing, and thinking all dominate their poles. The judgment/perception pole is even at 50%. In the double-letter combinations, EJ, TJ and ET (50.00%), ST (66.67%), SJ (33.33%), SP (33.33%), and T dom. (83.33%) all dominate their respective categories. Positive SSRs (Table 39) are noted in all cells containing subjects. ISTP's 4.90 is the largest SSR. Only Tdom is significant at p.=01.

School E - Females

Table 40 summarizes data for females at School E. Academic classification is distributed as four freshmen, three sophomores, three juniors, and one senior. Upper classmen represent approximately 36.36% of the female sample. Areas of academic concentration are:

Table 40: *School E Females*

	BM	BME
Freshmen:	1	3
Sophomore:	2	1
Junior:	3	0
Senior:	0	1
Totals (%):	6 (54.54%)	5 (45.46%)

The Bachelor of Music area has six students or 54.54% and there are five music education majors (45.46%). Only one music education major is classified in upper division. The type table cell numbers for School E Females (Table 41) indicate that the greatest percentage (27.27%) occurs in the personality types INTJ and ESTJ (N=3). Second is INFJ with 18.18% followed by ISFJ, ISTP, ENFP, ENTP and ESFJ each with

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percentages of 9.09%. Eight cells contain no subjects, and no cell contains over three students.

Chart 10 compares the number and percentages for School E Females to the Female Composite. Of the three students that placed in the INFJ type, two are in School E's listing. The three students listed as INTJ in School E Females make up all of this type in the Female Composite.

Chart 10: *Type Comparison of Female Composite and School E Females*

N	Female Composite		School E Females	N
7	9.72	ISFJ	9.09	1
3	4.17	INFJ	18.18	2
3	4.17	INTJ	27.27	3
1	1.39	ISTP	9.09	1
7	9.72	ENFP	9.09	1
4	5.56	ENTP	9.09	1
19	26.39	ESTJ	27.27	3
6	8.33	ESFJ	9.09	1

The greatest single-letter difference occurs in the category judgment/perception. The base population predictions are 63% for judgment and 36% for perception. The observed frequencies are 72.73% and 27.27% respectively. These observed figures exceed the base population by almost 10%. In double-letter combinations IJ, EJ, ST, TJ,FJ,ES and T dom. are all 36.36%. The SJ and N dom. are both 45.45%. The SSRs (Table 42) for cell types above one are INFJ (4.80), INTJ (1.88), ISTP (3.71), ENTP (2.60) and ESTJ (3.14).

Table 41: *School E Females*

ISTJ N = 0 % = 0.00	ISFJ N = 1 % = 9.09	INFJ N = 2 % = 18.18	INTJ N = 3 % = 27.27
ISTP N = 1 % = 9.09	ISFP N = 0 % = 0	INFP N = 0 % = 0.00	INTP N = 0 % = 0.00
ESTP N = 0 % = 0.00	ESFP N = 0 % = 0	ENFP N = 1 % = 9.09	ENTP N = 1 % = 9.09
ESTJ N = 3 % = 27.27	ESFJ N = 1 % = 9.09	ENFJ N = 0 % = 0	ENTJ N = 0 % = 0.00

	N	%
E	6	54.55
I	5	45.45
S	6	54.55
N	5	45.45
T	6	54.55
F	5	45.45
J	8	72.73
P	3	27.27
IJ	4	36.36
IP	1	9.09
EP	2	18.18
EJ	4	36.36
ST	4	36.36
SF	2	18.18
NF	3	27.27
NT	2	18.18
SJ	5	45.45
SP	1	9.09
NP	2	18.18
NJ	3	27.27
TJ	4	36.36
TP	2	18.18
FP	1	9.09
FJ	4	36.36
IN	3	27.27
EN	2	18.18
IS	2	18.18
ES	4	36.36
ET	4	36.36
EF	2	18.18
IF	3	27.27
IT	2	18.18
S dom.	1	9.09
N dom.	5	45.45
T dom.	4	36.36
F dom.	1	9.09

Table 42: *School E Females with SSR*

ISTJ	ISFJ	INFJ	INTJ
N=0	N=1	N=2	N=3
%=0.00	%=9.09	%=18.18	%=27.27
I=0.00	I=0.79	I=4.80	I=1.88
ISTP	**ISFP**	**INFP**	**INTP**
N=1	N=0	N=0	N=0
%=9.09	%=0.00	%=0.00	%=0.00
I=3.71	I=0.00	I=0.00	I=0.00
ESTP	**ESFP**	**ENFP**	**ENTP**
N=0	N=0	N=1	N=1
%=0.00	%=0.00	%=9.09	%=9.09
I=0.00	I=0.00	I=0.77	I=2.60
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N=3	N=1	N=0	N=0
%=27.27	%=9.09	%=0.00	%=0.00
I=3.14	I=0.60	I=0.00	I=0.00

Base Population N= 14,519. Groups are independent.

Calculated values of Chi square *or* Fisher's exact probability (underlined).

	N	%	I
E	6	54.55	0.91
I	5	45.45	1.13
S	6	54.55	0.89
N	5	45.45	1.18
T	6	54.55	1.72
F	5	45.45	0.67
J	8	72.73	1.26
P	3	27.27	0.64
IJ	4	36.36	1.50
IP	1	9.09	0.57
EP	2	18.18	0.69
EJ	4	36.36	1.09
ST	4	36.36	1.75
SF	2	18.18	0.45
NF	3	27.27	0.99
NT	2	18.18	1.66
SJ	5	45.45	1.08
SP	1	9.09	0.47
NP	2	18.18	0.79
NJ	3	27.27	1.75
TJ	4	36.36	1.74
TP	2	18.18	1.68
FP	1	9.09	0.29
FJ	4	36.36	0.99
IN	3	27.27	1.99
EN	2	18.18	0.73
IS	2	18.18	0.69
ES	4	36.36	1.04
Sdom.	1	9.09	0.31
Ndom.	5	45.45	2.14
Tdom.	4	36.36	2.21
Fdom.	1	9.09	0.28

Type table significance

0.63	1.00	0.06	0.21
0.24	0.65	0.65	1.00
1.00	0.62	1.00	0.32
0.06	0.71	0.64	1.00

E	0.12	IJ	0.48	SJ	1.00	IN	0.38
I	0.76	IP	0.71	SP	0.49	EN	0.74
S	0.22	EP	0.74	NP	0.75	IS	0.74
N	0.76	EJ	1.00	NJ	0.39	ES	1.00
T	2.63	ST	0.26	TJ	0.26	Sd	0.19
F	0.12	SF	0.22	TP	0.62	Nd	0.06
J	1.02	NF	1.00	FP	0.19	Td	0.09
P	0.37	NT	0.62	FJ	1.00	Fd	0.12

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<u>School F - Males</u>

Table 43 summaries data for males at School F. The Bachelor of Music area has no students while there are seventeen music education majors. Academic classification is distributed as seven freshmen, five sophomores, four juniors, and one senior. There are five music education majors (29.41%) classified as upper division compared to 70.59% lower division music majors. Areas of academic concentration are:

Table 43: *School F Males*

	BM	BME
Freshmen:	0	7
Sophomore:	0	5
Junior:	0	4
Senior:	0	1
Totals (%):	0	17 (100%)

The type table cell numbers for School F Males are relatively small. The largest cell type for School F Males (Table 44) is INTJ (N=3). This cell has 17.65% of the male sample. The ISTJ, ISTP, INTP, ESTJ and ENTJ are all listed with two subjects at 11.76% of the sample. The INFJ, ISFP and ESTP (N = 1) are all 5.88% of the sample. The remaining six cells have no subjects listed.

Chart 11 compares the numbers and percentages of male students from School F to the Composite Male sample. The largest number of students in a cell is INTJ with three. The composite has eight students listed in that category meaning the sample has almost half of this group. Two students are listed as INTP in School F Males, the total in the male composite is three, meaning the sample has more than half the entries.

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Chart 11: *Type Comparison of Male Composite and School F Males*

	Male Composite		School F Males	
N				N
8	10.90	ISTJ	11.76	2
4	5.47	INFJ	5.88	1
8	10.90	INTJ	17.65	3
12	16.43	ISTP	11.76	2
1	1.36	ISFP	5.88	1
3	4.10	INTP	11.76	2
2	2.73	ESTP	5.88	1
14	19.17	ESTJ	11.76	2
3	4.10	ESFJ	5.88	1
5	6.84	ENTJ	11.76	2

The greatest difference from the base population occurs in the thinking vs. feeling category where the School F percentage for thinking is 82.35% compared to 17.65% for feeling. Introversion and judgment follow with 64.71%. Sensing and intuition are distributed at 52.94% and 47.06%. CAPT predicted that a greater percentage of musicians would be extroverted and intuitive. In the School F Males subsample the predicted dominant traits were confirmed. Of the double-letter combinations, NJ, IN and IJ (35.29%), ST (41.18%), NT (41.18%), TJ (52.94%), and T dom. (47.06%) are all above their corollary trait. Positive SSRs (Table 45) are in seven of the cells containing subjects. The INTJ has a SSR of 3.27 that is the largest SSR. The only significant double letter is NJ at p.=05.

Table 44: *School F Males*

ISTJ	ISFJ	INFJ	INTJ
N = 2	N = 0	N = 1	N = 3
% = 11.76	% = 0	% = 5.88	% = 17.65
ISTP	ISFP	INFP	INTP
N = 2	N = 1	N = 0	N = 2
% = 11.76	% = 5.88	% = 0	% = 11.76
ESTP	ESFP	ENFP	ENTP
N = 1	N = 0	N = 0	N = 0
% = 5.88	% = 0	% = 0	% = 0
ESTJ	ESFJ	ENFJ	ENTJ
N = 2	N = 1	N = 0	N = 2
% = 11.76	% = 5.88	% = 0	% = 11.76

	N	%
E	6	35.29
I	11	64.71
S	9	52.94
N	8	47.06
T	14	82.35
F	3	17.65
J	11	64.71
P	6	35.29
IJ	6	35.29
IP	5	29.41
EP	1	5.88
EJ	5	29.41
ST	7	41.18
SF	2	11.76
NF	1	5.88
NT	7	41.18
SJ	5	29.41
SP	4	23.53
NP	3	11.76
NJ	6	35.29
TJ	9	52.94
TP	5	29.41
FP	1	5.88
FJ	2	11.76
IN	6	35.29
EN	2	11.76
IS	5	29.41
ES	4	23.53
ET	5	29.41
EF	1	5.88
IF	2	11.76
IT	9	52.94
S dom.	3	17.65
N dom.	4	23.53
T dom.	8	47.06
F dom.	2	11.76

Table 45: *School F Males with SSR*

ISTJ	ISFJ	INFJ	INTJ
N=2	N=0	N=1	N=3
%=11.76	%=0.00	%=5.88	%=17.65
I=0.94	I=0.00	I=2.22	I=3.27
ISTP	**ISFP**	**INFP**	**INTP**
N=2	N=1	N=0	N=2
%=11.76	%=5.88	%=0.00	%=11.76
I=1.73	I=1.44	I=0.00	I=1.77
ESTP	**ESFP**	**ENFP**	**ENTP**
N=1	N=0	N=0	N=0
%=5.88	%=0.00	%=0.00	%=0.00
I=0.88	I=0.00	I=0.00	I=0.00
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N=2	N=1	N=0	N=2
%=11.76	%=5.88	%=0.00	%=11.76
I=0.92	I=1.08	I=0.00	I=2.04

Base Population N= 12,637. Groups are independent.

Calculated values of Chi square *or* Fisher's exact probability (underlined).

Type table significance			
1.00	0.62	0.37	0.06
0.63	1.00	0.62	0.62
1.00	0.64	0.42	0.41
1.00	1.00	0.69	0.26

E	1.72	IJ	0.77	SJ	0.62	IN	2.48
I	1.72	IP	0.56	SP	1.00	EN	0.40
S	0.19	EP	0.09	NP	0.27	IS	1.00
N	0.19	EJ	1.00	NJ	4.14*	ES	0.79
T	2.63	ST	0.04	TJ	1.99	Sd	0.43
F	0.13	SF	0.55	TP	1.00	Nd	1.00
J	0.93	NF	0.34	FP	0.22	Td	1.76
P	0.93	NT	2.52	FJ	0.76	Fd	0.57

	N	%	I
E	6	35.29	0.69
I	11	64.71	1.33
S	9	52.94	0.91
N	8	47.06	1.13
T	14	82.35	1.30
F	3	17.65	0.48
J	11	64.71	1.22
P	6	35.29	0.75
IJ	6	35.29	1.36
IP	5	29.41	1.29
EP	1	5.88	0.24
EJ	5	29.41	1.09
ST	7	41.18	1.06
SF	2	11.76	0.61
NF	1	5.88	0.34
NT	7	41.18	1.68
SJ	5	29.41	0.81
SP	4	23.53	1.07
NP	2	11.76	0.47
NJ	6	35.29	2.10
TJ	9	52.94	1.45
TP	5	29.41	1.09
FP	1	5.88	0.29
FJ	2	11.76	0.71
IN	6	35.29	1.76
EN	2	11.76	0.54
IS	5	29.41	1.02
ES	4	23.53	0.80
Sdom.	3	17.65	0.61
Ndom.	4	23.53	1.12
Tdom.	8	47.06	1.47
Fdom.	2	11.76	0.66

<u>School F - Females</u>

Table 46 summarizes data for females at School F. Academic classification is distributed as ten freshmen, three sophomores, two juniors, and no seniors. The Bachelor of Music area has one student who is 6.67% of the sample population. There are fourteen music education majors (93.33%). Only 14.00% of the music education majors are classified as upper division. Upper classmen represent approximately 13.33% of the female sample. Areas of academic concentrations are:

Table 46: *School F Females*

	BM	BME
Freshmen:	1	9
Sophomore:	0	3
Junior:	0	2
Senior:	0	0
Totals (%):	1 (6.67%)	14 (93.33%)

Review of Table 47 indicates that the greatest percentage (46.67%) occurs in the type ESTJ (N =7). This compares to 22.76% for ESTJ and 26.39% for ESTJ in the female composite. ISFP and ESFJ follow with 13.33% and ISFJ, INFP, INTP and ENFP each have 6.67%. The remaining nine cells contain no subjects.

Chart 12 shows the numbers and percentages of School F Females compared to the composite. This subsample has half the ISFP and INFP types listed in the composite table. The greatest occurences for both groups are the ESTJs (School F Females =7, Composite 19).

Chart 12: *Type Comparison of Female Composite and School F Females*

N	Females Composite		School F Females	N
7	9.72	ISFJ	6.67	1
4	5.56	ISFP	13.13	2
2	2.78	INFP	6.67	1
4	5.56	INTP	6.67	1
7	9.72	ENFP	6.67	1
19	26.39	ESTJ	46.67	7
6	8.33	ESFJ	13.33	2

The greatest single-letter difference from the base population occurs in the category sensing vs. intuition. The base population has a frequency of 61.38% for sensing and 38.62% for intuition. The observed frequencies for School F Females are 80.00% and 20.00% respectively. These figures exceed the base population by almost 20.00% in each area. The type table cells (Table 47) for School F Females are relatively small. The largest double-letter percentages are EJ (60.00%), ST (46.67%), SJ (66.67%), TJ (46.67%), ES (60.00%) and T dom (53.33%). Other prominent double-letter combinations are SF and F dom. both at 33.33%. The cells that list a positive SSR (Table 48) are ISFP (2.32), INFP (1.18), INTP (3.18) and ESTJ (5.38). ESTJ is the only significant type at p.=001. The following double letters, EJ, ST, TJ, and ES are significant at p.=05. Tdom is significant at p.=001. Thinking exceeds feeling by 6.00%. Extroversion, sensing, and judgment all dominate their respective poles by at least 30%. The judgmental percentage of 66.67% is in line with CAPT's prediction of 65%.

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Table 47: Type Composite - School F Females

ISTJ	ISFJ	INFJ	INTJ
N = 0	N = 1	N = 0	N = 0
% = 0	% = 6.67	% = 0	% = 0
ISTP	ISFP	INFP	INTP
N = 0	N = 2	N = 1	N = 1
% = 0	% = 13.33	% = 6.67	% = 6.67
ESTP	ESFP	ENFP	ENTP
N = 0	N = 0	N = 1	N = 0
% = 0	% = 0	% = 6.67	% = 0
ESTJ	ESFJ	ENFJ	ENTJ
N = 7	N = 2	N = 0	N = 0
% = 46.67	% = 13.33	% = 0	% = 0

	N	%
E	10	66.67
I	5	33.33
S	12	80.00
N	3	20.00
T	8	53.33
F	7	46.67
J	10	66.67
P	5	33.33
IJ	1	6.67
IP	4	26.67
EP	1	6.67
EJ	9	60.00
ST	7	46.67
SF	5	33.33
NF	2	13.33
NT	1	6.67
SJ	10	66.67
SP	2	13.33
NP	3	20.00
NJ	0	0.00
TJ	7	46.67
TP	1	6.67
FP	4	26.67
FJ	3	20.00
IN	2	13.33
EN	1	6.67
IS	3	20.00
ES	9	60.00
ET	7	46.67
EF	3	20.00
IF	4	26.67
IT	1	6.67
S dom.	1	6.67
N dom.	1	6.67
T dom.	8	53.33
F dom.	5	33.33

Table 48: *School F Females with SSR*

ISTJ	ISFJ	INFJ	INTJ
N=0	N=1	N=0	N=0
%=0.00	%=6.67	%=0.00	%=0.00
I=0.00	I=0.58	I=0.00	I=0.00
ISTP	**ISFP**	**INFP**	**INTP**
N=0	N=2	N=1	N=1
%=0.00	%=13.33	%=6.67	%=6.67
I=0.00	I=2.32	I=1.18	I=3.18
ESTP	**ESFP**	**ENFP**	**ENTP**
N=0	N=0	N=1	N=0
%=0.00	%=0.00	%=6.67	%=0.00
I=0.00	I=0.00	I=0.57	I=0.00
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N=7	N=2	N=0	N=0
%=46.67	%=13.33	%=0.00	%=0.00
I=5.38	I=0.89	I=0.00	I=0.00

Base Population N= 14,519. Groups are independent.

Calculated values of Chi square *or* Fisher's exact
probability (underlined).

Type table significance			
0.42	0.72	0.67	1.00
1.00	0.21	1.00	0.27
1.00	0.39	0.71	0.68
27.17#	1.00	0.62	1.00

E	0.30	IJ	0.14	SJ	3.72	IN	1.00
I	0.61	IP	0.28	SP	0.75	EN	0.14
S	2.19	EP	0.14	NP	1.00	IS	0.77
N	0.19	EJ	4.77*	NJ	0.15	ES	4.16*
T	3.21	ST	6.08*	TJ	5.99*	Sd	0.08
F	3.21	SF	0.61	TP	0.72	Nd	0.22
J	0.50	NF	0.26	FP	0.79	Td	14.80#
P	0.60	NT	0.72	FJ	0.20	Fd	1.00

	N	%	I
E	10	66.67	1.12
I	5	33.33	0.83
S	12	80.00	1.30
N	3	20.00	0.52
T	8	53.33	1.68
F	7	46.67	0.68
J	10	66.67	1.16
P	5	33.33	0.79
IJ	1	6.67	0.27
IP	4	26.67	1.67
EP	1	6.67	0.25
EJ	9	60.00	1.80
ST	7	46.67	2.24
SF	5	33.33	0.82
NF	2	13.33	0.48
NT	1	6.67	0.61
SJ	10	66.67	1.59
SP	2	13.33	0.69
NP	3	20.00	0.87
NJ	0	0.00	0.00
TJ	7	46.67	2.23
TP	1	6.67	0.61
FP	4	26.67	0.85
FJ	3	20.00	0.54
IN	2	13.33	0.97
EN	1	6.67	0.27
IS	3	20.00	0.75
ES	9	60.00	1.72
Sdom.	1	6.67	0.23
Ndom.	1	6.67	0.31
Tdom.	8	53.33	3.24
Fdom.	5	33.33	1.01

The Sample by Degree Program

Table 49 summarizes MBTI types for students enrolled in the Bachelor of Music degree plan (N = 43). The largest cell is ESTJ (N = 8 at 18.60%). The next prominent cells are ISFJ and INTJ (N = 5 at 11.63%), ISTP and ENFP (N = 4 at 9.30%). Only three of the cells are empty, ISFP, INFP, and ENFJ. The eight cells ISFJ, INFJ, INTJ, ISTP, INTP, ENFP, ENTP, and ESTJ all show positive SSRs. INTJ is significant at p.=05. Two significant single-letters are T and F at p.=05 for each; double letters are Ndom and Tdom at p.05 each.

The model type is I (N = 23 at 53.49%), S (N = 24 at 55.81%), T (N = 28 at 65.12%), and J (N = 27 at 62.79%). Dominant double-letter combinations are SJ (41.86%), TJ (39.53%), IJ, ST, and T dom. (37.21%). The F dom. has an unusually low percentage of 4.65%. The composite sample E is 53.10% and I is 46.90% while the BM students reverse those numbers at 46.51% and 53.49% respectively. The remaining three single-letter poles are evenly matched. The following double-letter groupings have higher percentages than the composite sample: IJ, EP, NF, NT, NP, NJ, TP, FJ, IN, IS, Sdom. and Ndom. The N trait is dominant in the double-letter combinations.

Table 50 summarizes MBTI types for students enrolled in the Bachelor of Music Education degree (N = 102). The largest cell is the ESTJ (N = 25 at 24.51%) which is more than double the numbers in the other cells. Other prominent cells are ISTJ and ISTP (N = 9 at 8.82%). ENTP, ESFJ and ENTJ (N = 7 at 6.86%) and INTJ (N = 6 at 5.88%). No cell is without an entry. Of the nine cells that show positive SSRs ESTJ (2.31), ISTP (1.97), and INTJ (1.60) are prominent. ISTP is significant at p.=05 and ESTJ is significant at p.=001. Significant single-letters are T and F at p.=001; double letters are ST at p.=001, SF at p.=01, NF at p.=05, TJ at p.=001. FP at p.=01. FJ at p.=05, Sdom at p.=05, and Tdom at p.=001.

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The model type established from single-letter calculations is E (N = 57 at 55.88%), S (N = 65 at 63.73%), T (N = 70 at 68.63%), and J (N = 65 at 63.73%). Each single-letter in the model type is more than 10% above the opposite pole. The double-letter combinations with large percentages are EJ (40.20%),ST (45.10%), SJ (45.10%), TJ (46.08%), and T dom. (44.12%). When comparing the composite sample to the music education majors (Chart 14), the single-letter percentages are similar for both. In double-letter combinations, the Music Education Degrees list some higher percentages than the Composite.

Performance Area Emphasis

Students in the composite sample are divided into various groupings for performance area analysis. Although small cell size hindered analysis of individual instruments as a specific grouping, preliminary type tables are constructed for like instruments. String instrument majors are included with the keyboard majors because of their limited numbers.

Brass Emphasis

Table 51 shows type preferences selected by music majors whose primary performance area is brass without regards to the music degree plan (N = 37). Six cells have three persons or more listed and percentages over 6.25%, ISTJ, INTJ, ISTP, ENTP, ESTJ and ENTJ. The largest cells are ISTJ and ESTJ (N = 7 at 18.92%).

Seven cells show positive SSRs: ISTJ (2.00), INTJ (2.94), ISTP (2.41), ESTP (1.17), ENTP (2.15), ESTJ (1.78) and ENTJ (1.84). INTJ is significant at p.=05. The single-letter category percentages reveal preferences for I (N = 19 at 51.35%), S (N = 23 at 62.16%), T (N = 32 at 86.49%), and J (N = 25 at 67.57). The widest margin, however, is between the poles T and F with a difference greater than 70%. The S-N, and J-P margin

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Table 49: *Bachelor of Music Degrees with SSR*

ISTJ N= 3 %= 6.98 I= 0.74	ISFJ N= 5 %= 11.63 I= 1.34	INFJ N= 3 %= 6.98 I= 2.14	INTJ N= 5 %= 11.63 I= 3.17
ISTP N= 4 %= 9.30 I= 2.08	ISFP N= 0 %= 0.00 I= 0.00	INFP N= 0 %= 0.00 I= 0.00	INTP N= 3 %= 6.98 I= 1.66
ESTP N= 1 %= 2.33 I= 0.50	ESFP N= 1 %= 2.33 I= 0.36	ENFP N= 4 %= 9.30 I= 1.01	ENTP N= 3 %= 6.98 I= 1.39
ESTJ N= 8 %= 18.60 I= 1.75	ESFJ N= 2 %= 4.65 I= 0.44	ENFJ N= 0 %= 0.00 I= 0.00	ENTJ N= 1 %= 2.33 I= 0.53

Base Population N= 27,156. Groups are independent. Calculated values of Chi Square *or* Fisher's exact probability (underlined).

	N	%	I
E	20	46.51	0.83
I	23	53.49	1.21
S	24	55.81	0.93
N	19	44.19	1.10
T	28	65.12	1.40
F	15	34.88	0.65
J	27	62.79	1.13
P	16	37.21	0.84
IJ	16	35.21	1.48
IP	7	16.28	0.85
EP	9	20.93	0.83
EJ	11	25.58	0.84
ST	16	37.21	1.28
SF	8	18.60	0.61
NF	7	16.28	0.71
NT	12	27.91	1.61
SJ	18	41.86	1.06
SP	6	13.95	0.68
NP	10	23.26	0.97
NJ	9	20.93	1.29
TJ	17	39.53	1.30
TP	11	25.58	1.40
FP	5	11.63	0.44
FJ	10	23.26	0.85
IN	11	25.58	1.54
EN	8	18.60	0.79
IS	12	27.91	1.01
ES	12	27.91	0.86
S dom.	10	23.26	0.79
N dom.	15	34.88	1.65
T dom.	16	37.21	1.57
F dom.	2	4.65	0.18

Type table significance

0.63	0.58	0.16	0.02*
0.13	0.17	0.17	0.43
0.72	0.37	1.00	0.72
2.90	0.23	0.17	0.72

E	1.49	IJ	3.37	SJ	0.12	IN	2.47
I	1.49	IP	0.23	SP	1.16	EN	0.56
S	0.30	EP	0.44	NP	0.01	IS	0.00
N	0.30	EJ	0.48	NJ	0.72	ES	0.38
T	5.98*	ST	1.34	TJ	2.74	Sd	0.75
F	5.98*	SF	2.97	TP	1.51	Nd	4.86*
J	0.93	NF	1.03	FP	0.04	Td	4.33*
P	0.93	NT	3.36	FJ	0.36	Fd	0.00

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between poles is approximately 25%. In the double-letter combinations ST and TJ are

above 50%. Other prominent listings are SJ (43.24%), T dom. (40.54%), IJ and IS

Chart 13: *Type Comparison of the Composite and Bachelor of Music Degrees*

	Composite	Bachelor of Music Degrees		
N	%		%	N
77	53.10	E	46.51	20
68	46.90	I	53.49	23
89	61.38	S	55.81	24
56	38.62	N	44.19	19
98	67.59	T	65.12	28
47	32.41	F	34.88	15
92	63.45	J	62.79	27
53	36.55	P	37.21	16
40	27.59	IJ	35.21	16
28	19.31	IP	16.28	7
25	17.24	EP	20.93	9
52	35.86	EJ	25.58	11
62	42.76	ST	37.21	16
27	18.62	SF	18.60	8
20	13.79	NF	16.28	7
36	24.83	NT	27.91	12
64	44.14	SJ	41.86	18
25	17.24	SP	13.95	6
28	19.31	NP	23.26	10
28	19.31	NJ	20.93	9
64	44.14	TJ	39.53	17
34	23.45	TP	25.58	11
19	13.10	FP	11.63	5
28	19.31	FJ	23.26	10
28	19.31	IN	25.58	11
28	19.31	EN	18.60	8
40	27.59	IS	27.91	12
49	33.79	ES	27.91	12
29	20.00	S Dom.	23.26	10
36	24.83	N dom.	34.88	15
61	42.07	T dom.	37.21	16
19	13.10	F dom.	4.65	2

Table 50: *Bachelor of Music Education Degrees with SSR*

ISTJ	ISFJ	INFJ	INTJ
N= 9	N= 5	N= 4	N= 6
%= 8.82	%= 4.90	%= 3.92	%= 5.88
I= 0.93	I= 0.57	I= 1.20	I= 1.60

ISTP	ISFP	INFP	INTP
N= 9	N= 5	N= 3	N= 4
%= 8.82	%= 4.90	%= 2.94	%= 3.92
I= 1.97	I= 0.99	I= 0.53	I= 0.93

ESTP	ESFP	ENFP	ENTP
N= 3	N= 2	N= 4	N= 7
%= 2.94	%= 6.86	%= 3.92	%= 6.86
I= 0.64	I= 0.30	I= 0.43	I= 1.37

ESTJ	ESFJ	ENFJ	ENTJ
N= 25	N= 7	N= 2	N= 7
%= 24.51	%= 6.86	%= 1.96	%= 6.86
I= 2.31	I= 0.65	I= 0.41	I= 1.55

Base Population N= 27,156. Groups are independent.

Calculated values of Chi Square *or* Fisher's exact probability (underlined).

Type table significance			
0.05	0.22	0.78	1.40
4.47*	1.00	0.29	1.00
0.49	0.07	0.08	0.72
20.65#	1.49	0.24	1.44

E	0.00	IJ	0.13	SJ	1.42	IN	0.00
I	0.00	IP	0.13	SP	0.24	EN	0.83
S	0.62	EP	5.02	NP	2.20	IS	0.00
N	0.62	EJ	4.58	NJ	0.45	ES	0.72
T	20.01#	ST	12.44#	TJ	16.10#	Sd	5.57*
F	20.01#	SF	7.00+	TP	1.21	Nd	0.02
J	2.79	NF	5.82*	FP	8.16+	Td	23.37#
P	2.79	NT	2.74	FJ	4.80*	Fd	4.51

	N	%	I
E	57	55.88	1.00
I	45	44.12	1.00
S	65	63.73	1.06
N	37	36.27	0.90
T	70	68.63	1.48
F	32	31.37	0.59
J	65	63.73	1.15
P	37	36.27	0.81
IJ	24	23.53	0.94
IP	21	20.59	1.07
EP	16	15.69	0.62
EJ	41	40.20	1.32
ST	46	45.10	1.55
SF	19	18.63	0.61
NF	13	12.75	0.56
NT	24	23.53	1.36
SJ	46	45.10	1.15
SP	19	18.63	0.90
NP	18	17.65	0.74
NJ	19	18.63	1.15
TJ	47	46.08	1.64
TP	23	22.55	1.23
FP	14	13.73	0.52
FJ	18	17.65	0.65
IN	17	16.67	1.00
EN	20	19.61	0.84
IS	28	27.45	1.00
ES	37	36.27	1.12
S dom.	19	18.63	0.64
N dom.	21	20.59	0.97
T dom.	45	44.12	1.86
F dom.	17	16.67	0.64

Chart 14: *Type Comparison of the Composite and Music Education Degrees*

	Composite	Bachelor of Music Education Degrees		
N	%		%	N
77	53.10	E	55.88	57
68	46.90	I	44.12	45
89	61.38	S	63.73	65
56	38.62	N	36.27	37
98	67.59	T	68.63	70
47	32.41	F	31.37	32
92	63.45	J	63.73	65
53	36.55	P	36.27	37
40	27.59	IJ	23.53	24
28	19.31	IP	20.59	21
25	17.24	EP	15.69	16
52	35.86	EJ	40.20	41
62	42.76	ST	45.10	46
27	18.62	SF	18.63	19
20	13.79	NF	12.75	13
36	24.83	NT	23.53	24
64	44.14	SJ	45.10	46
25	17.24	SP	18.63	19
28	19.31	NP	17.65	18
28	19.31	NJ	18.63	19
64	44.14	TJ	46.08	47
34	23.45	TP	22.55	23
19	13.10	FP	13.73	14
28	19.31	FJ	17.65	18
28	19.31	IN	16.67	17
28	19.31	EN	19.61	20
40	27.59	IS	27.45	28
49	33.79	ES	36.27	37
29	20.00	S dom.	18.63	19
36	24.83	N dom.	20.59	21
61	42.07	T dom.	44.12	45
19	13.10	F dom.	16.67	17

(35.14%). The only significant type is ISTJ at p.=05. Only one single-letter, T, is significant at p.=001; double letters are ST at p.=001, NT at p.=05, TJ at p.=001, and Tdom at p.=05.

When comparing the single-letter percentages to the type composite (Chart 15), introversion leads extroversion at 51.35%. T in the type composite is 67.59%, while the brass emphasis is 86.49%. The remaining single-letter traits are evenly distributed. When comparing double-letter listings, the following percentages are higher than those for the type composite, IJ, ST, NT, SP, NJ, TJ, TP, EN, IS, and Sdom. The largest double-letter and type composite percentage is TJ at 56.76% and 44.14% respectively.

Table 51: *Brass Emphasis with SSR*

ISTJ N= 7 %=18.92 I= 2.00	ISFJ N= 1 %= 2.70 I= 0.31	INFJ N= 1 %= 2.70 I= 0.83	INTJ N= 4 %= 10.81 I= 2.94
ISTP N= 4 %= 10.81 I= 2.41	ISFP N= 1 %= 2.70 I= 0.54	INFP N= 0 %= 0.00 I= 0.00	INTP N= 1 %= 2.70 I= 0.93
ESTP N= 2 %= 5.41 I= 1.17	ESFP N= 0 %= 0.00 I= 0.00	ENFP N= 0 %= 0.00 I= 0.00	ENTP N= 4 %= 10.81 I= 2.15
ESTJ N= 7 %= 18.92 I= 1.78	ESFJ N= 1 %= 2.70 I= 0.26	ENFJ N= 1 %= 2.70 I= 0.56	ENTJ N= 3 %= 8.11 I= 1.84

Base Population N= 27,156. Groups are independent.

Calculated values of Chi Square *or*
<u>Fisher's exact probability (underlined)</u>.

Type table significance			
3.84*	<u>0.25</u>	<u>1.00</u>	<u>0.05</u>
<u>0.08</u>	<u>0.72</u>	<u>0.17</u>	<u>0.74</u>
<u>1.00</u>	<u>0.17</u>	<u>0.08</u>	<u>0.11</u>
2.69	<u>0.18</u>	<u>0.73</u>	<u>0.41</u>

E	0.76	IJ	1.99	SJ	0.24	IN	0.00
I	0.76	IP	0.21	SP	0.06	EN	0.07
S	0.08	EP	1.63	NP	<u>0.18</u>	IS	1.05
N	0.08	EJ	0.07	NJ	1.18	ES	0.47
T	23.75#	ST	11.05#	TJ	14.92#	Sd	0.09
F	<u>0.00</u>	SF	<u>0.00</u>	TP	3.20	Nd	0.22
J	2.18	NF	<u>0.02</u>	FP	<u>0.00</u>	Td	5.79*
P	2.18	NT	5.90	FJ*	<u>0.00</u>	Fd	<u>0.01</u>

	N	%	I
E	18	48.65	0.87
I	19	51.35	1.16
S	23	62.16	1.04
N	14	37.84	0.94
T	32	86.49	1.86
F	5	13.51	0.25
J	25	67.57	1.22
P	12	32.43	0.73
IJ	13	35.14	1.40
IP	6	16.22	0.85
EP	6	16.22	0.64
EJ	12	32.43	1.07
ST	20	54.05	1.85
SF	3	8.11	0.26
NF	2	5.41	0.24
NT	12	32.43	1.87
SJ	16	43.24	1.10
SP	7	18.92	0.92
NP	5	13.51	0.56
NJ	9	24.32	1.50
TJ	21	56.76	2.02
TP	11	29.73	1.62
FP	1	2.70	0.10
FJ	4	10.81	0.40
IN	6	16.22	0.97
EN	8	21.62	0.92
IS	13	35.14	1.27
ES	10	27.03	0.84
S dom.	10	27.03	0.92
N dom.	9	24.32	1.15
T dom.	15	40.54	1.71
F dom.	3	8.11	0.31

Chart 15: *Type Comparison of the Composite and Brass Emphasis*

	Composite		Brass Emphasis	
N	%		%	N
77	53.10	E	48.65	18
68	46.90	I	51.35	19
89	61.38	S	62.16	23
56	38.62	N	37.84	14
98	67.59	T	86.49	32
47	32.41	F	13.51	5
92	63.45	J	67.57	25
53	36.55	P	32.43	12
40	27.59	IJ	35.14	13
28	19.31	IP	16.22	6
25	17.24	EP	16.22	6
52	35.86	EJ	32.43	12
62	42.76	ST	54.05	20
27	18.62	SF	8.11	3
20	13.79	NF	5.41	2
36	24.83	NT	32.43	12
64	44.14	SJ	43.24	16
25	17.24	SP	18.92	7
28	19.31	NP	13.51	5
28	19.31	NJ	24.32	9
64	44.14	TJ	56.76	21
34	23.45	TP	29.73	11
19	13.10	FP	2.70	1
28	19.31	FJ	10.81	4
28	19.31	IN	16.22	6
28	19.31	EN	21.62	8
40	27.59	IS	35.14	13
49	33.79	ES	27.03	10
29	20.00	S Dom.	27.03	10
36	24.83	N dom.	24.32	9
61	42.07	T dom.	40.54	15
19	13.10	F dom.	8.11	3

Type Table 52 summarizes MBTI type frequencies for music majors whose primary performance medium is voice without regard to the music degree plan (N = 42). Seven cells have more than three entries and percentages over 6.25%, ISTJ (9.52%), ISFJ (9.52%), ESFP and ENTJ (7.14%), ENFP (11.90%), ESTJ (21.43%), and ESFJ (14.29%). Eight cells show positive SSRs: ISTJ (1.01), ISFJ (1.10), INTP (1.13), ESFP (1.10), ENFP (1.30), ESTJ (2.02), ESFJ (1.35) and ENTJ (1.62). The single-letter percentages reveal preferences for E (N = 28 at 66.67%), S (N = 27 at 64.29%), and J (N = 28 at 66.67%). There is no difference in the percentages of T and F (N = 21 at 50.00%), however, T has the greater index number (1.08). The widest difference between single-letter percentages are noted in the E-I, and J-P (both over 30.00%) categories. The highest double-letter grouping is SJ (54.76%). Other high percentage double-letter combinations are EJ (42.86%), TJ (40.48%), ES (42.86%). Only ESTJ is significant (p.=05). Only one double letter, SJ, is significant (p.=05).

The type composite percentages for E and I are evenly distributed at 50% (Chart 16) while E dominates in the the vocal emphasis at 66.67%. The T and F of the vocal emphasis are both evenly distributed at 50%. For the remaining two poles, S and N, J and P, the percentages are evenly distributed. When comparing double-letter percentages, the sample percentages higher than the composite are EP, EJ, SF, NF, SJ, NP, FP, FJ, EN, ES, and S dom.

Type Table 53 summarizes MBTI types for music majors whose primary performance areas are keyboard or string instruments without regard to music degree plan (N = 20). Four cells in the keyboard chart contain two or more students or percentages over 6.25%: ISFJ (10.00%), INFJ (15.00%), ISTP (15.00%), and ESTJ (25.00%).

Seven cells have one entry. Eight cells show positive SSRs: ISFJ (1.15), INFJ (4.60), INTJ (1.36), ISTP (3.35), ISFP (1.01), INTP (1.19), ESTJ (2.36) and ENTJ (1.13). The single-letter category percentages reveal preferences for I (N = 12 at 60.00%), S (N= 13 at 65.00%), T (N = 12 at 60.00%), and J (N = 14 at 70.00%). There is a 20.00% difference between E and I cells and 30.00% or more among the remaining three poles. The widest difference is in the J (N = 14 at 70.00) and P (N = 6 at 30.00%). The double-letter combinations with 40.00% or more are ST and SJ (45.00%), TJ (40.00%), and Tdom. (50.00%). Each has a positive index above 1.00. When comparing the single-letter percentages (Chart 17) the keyboard emphasis students register 40% extroverted while the composite is 53.10% . The introversion percentages are 60% and 46.90% respectively. The three remaining poles are evenly distributed. The double-letter combinations in the keyboard emphasis that are higher than the composite are IJ, IP, ST, SF, NF, SJ, SP, NJ, FJ, IN, IS, Ndom., and Tdom. The S trait is present in five of the combinations, and the I trait is present in four. The largest combination common to both composite and sample are the ST (45% and 42.76%) and SJ (45% and 44.14%). Significant types are ESTJ at p.=05 and INFJ at p.=03. Only one double letter is significant, EP at p.=04.

Woodwind Majors

Table 54 summarizes MBTI types for music majors whose primary performance area is woodwinds without regard to music degree plan (N = 38). Five cells in the table contain percentages over 6.25%: ISFJ (13.16%), INTJ (10.53%), INTP (7.89%), ENTP (10.53%) and ESTJ (23.68%). Six cells show positive SSRs, the most prominent being INTJ (2.87), ESTJ (2.23), and ENTP (2.10). The INTF cell is significant at p.=05. The single-letter percentages reveal preferences for S (N= 21 at 55.26%), T (N = 23 at 60.53%), and J (N = 22 at 57.89%). E and I are evenly distributed. The widest difference between poles is in the T (N = 23 at 60.53%) and F (N = 15 at 39.47%). The

Table 52: *Vocal Emphasis with SSR*

ISTJ	ISFJ	INFJ	INTJ
N= 4	N= 4	N= 1	N= 1
%= 9.52	%= 9.52	%= 2.38	%= 2.38
I= 1.01	I= 1.10	I= 0.73	I= 0.65
ISTP	**ISFP**	**INFP**	**INTP**
N= 0	N= 1	N= 1	N= 2
%= 0.00	%= 2.38	%= 2.38	%= 4.76
I= 0.00	I= 0.48	I= 0.43	I= 1.13
ESTP	**ESFP**	**ENFP**	**ENTP**
N= 0	N= 3	N= 5	N= 2
%= 0.00	%= 7.14	%= 11.90	%= 4.76
I= 0.00	I= 1.10	I= 1.30	I= 0.95
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N= 9	N= 6	N= 0	N= 3
%= 21.43	%= 14.29	%= 0.00	%= 7.14
I= 2.02	I= 1.35	I= 0.00	I= 1.62

Base Population N = 27,156. Groups are independent.
Calculated values of Chi Square *or*
Fisher's exact probability (underlined).

	N	%	I
E	28	66.67	1.20
I	14	33.33	0.75
S	27	64.29	1.07
N	15	35.71	0.89
T	21	50.00	1.08
F	21	50.00	0.93
J	28	66.67	1.20
P	14	33.33	0.75
IJ	10	23.81	0.95
IP	4	9.52	0.50
EP	10	23.81	0.94
EJ	18	42.86	1.41
ST	13	30.95	1.06
SF	14	33.33	1.08
NF	7	16.67	0.73
NT	8	19.05	1.10
SJ	23	54.76	1.39
SP	4	9.52	0.46
NP	10	23.81	1.00
NJ	5	11.90	0.74
TJ	17	40.48	1.44
TP	4	9.52	0.52
FP	10	23.81	0.91
FJ	11	26.19	0.96
IN	5	11.90	0.72
EN	10	23.91	1.02
IS	9	21.43	0.78
ES	18	42.86	1.33
S dom.	11	26.19	0.89
N dom.	9	21.43	1.01
T dom.	14	33.33	1.41
F dom.	8	19.05	0.74

Type table significance

1.00	1.00	1.00	0.74
0.26	0.53	0.52	1.00
0.26	1.00	0.59	1.00
5.18*	0.61	0.18	0.43

E	2.02	IJ	0.04	SJ	4.19*	IN	0.54
I	2.02	IP	0.12	SP	0.09	EN	0.00
S	0.33	EP	0.05	NP	0.00	IS	0.80
N	0.33	EJ	3.06	NJ	0.54	ES	2.13
T	0.21	ST	0.06	TJ	3.14	Sd	0.19
F	0.21	SF	0.13	TP	0.16	Nd	0.00
J	2.12	NF	0.89	FP	0.12	Td	2.15
P	2.12	NT	0.09	FJ	0.03	Fd	1.02

dominate double-letter groupings are ST (31.58%), SJ (42.11%), TJ (36.84%), ES

(31.58%), and Tdom. (34.21%). Significant types are ESTJ at p.=01 and INTJ at p.=05.

Chart 16: *Type Comparison of the Composite and Vocal Emphasis*

N	Composite %		Vocal Emphasis %	N
77	53.10	E	66.67	28
68	46.90	I	33.33	14
89	61.38	S	64.29	27
56	38.62	N	35.71	15
98	67.59	T	50.00	21
47	32.41	F	50.00	21
92	63.45	J	66.67	28
53	36.55	P	33.33	14
40	27.59	IJ	23.81	10
28	19.31	IP	9.52	4
25	17.24	EP	23.81	10
52	35.86	EJ	42.86	18
62	42.76	ST	30.95	13
27	18.62	SF	33.33	14
20	13.79	NF	16.67	7
36	24.83	NT	19.05	8
64	44.14	SJ	54.76	23
25	17.24	SP	9.52	4
28	19.31	NP	23.81	10
28	19.31	NJ	11.90	5
64	44.14	TJ	40.48	17
34	23.45	TP	9.52	4
19	13.10	FP	23.81	10
28	19.31	FJ	26.19	11
28	19.31	IN	11.90	5
28	19.31	EN	23.91	10
40	27.59	IS	21.43	9
49	33.79	ES	42.86	18
29	20.00	S Dom.	26.19	11
36	24.83	N dom.	21.43	9
61	42.07	T dom.	33.33	14
19	13.10	F dom.	19.05	8

Table 53: *Keyboard Emphasis with SSR*

ISTJ N= 1 %= 5.00 I= 0.53	ISFJ N= 2 %= 10.00 I= 1.15	INFJ N= 3 %= 15.00 I= 4.60	INTJ N= 1 %= 5.00 I= 1.36
ISTP N= 3 %= 15.00 I= 3.35	ISFP N= 1 %= 5.00 I= 1.01	INFP N= 0 %= 0.00 I= 0.00	INTP N= 1 %= 5.00 I= 1.19
ESTP N= 0 %= 0.00 I= 0.00	ESFP N= 0 %= 0.00 I= 0.00	ENFP N= 1 %= 5.00 I= 0.54	ENTP N= 0 %= 0.00 I= 0.00
ESTJ N= 5 %= 25.00 I= 2.36	ESFJ N= 1 %= 5.00 I= 0.47	ENFJ N= 0 %= 0.00 I= 0.00	ENTJ N= 1 %= 5.00 I= 1.13

Base Population N= 27,156. Groups are independent.

Calculated values of Chi Square *or* Fisher's exact probability (underlined).

Type table significance			
0.72	1.00	0.03*	1.00
0.06	1.00	0.42	1.00
0.62	0.40	0.72	0.43
0.05*	0.51	0.62	1.00

E	2.01	IJ	1.05	SJ	0.27	IN	0.36
I	2.01	IP	0.57	SP	1.00	EN	0.19
S	0.22	EP	0.04*	NP	0.19	IS	0.55
N	0.22	EJ	0.20	NJ	0.35	ES	0.05
T	1.47	ST	2.42	TJ	1.38	Sd	0.22
F	1.47	SF	0.34	TP	1.00	Nd	0.78
J	1.70	NF	0.80	FP	0.13	Td	7.64
P	1.70	NT	1.00	FJ	0.07	Fd	0.13

	N	%	I
E	8	40.00	0.72
I	12	60.00	1.36
S	13	65.00	1.08
N	7	35.00	0.87
T	12	60.00	1.29
F	8	40.00	0.75
J	14	70.00	1.26
P	6	30.00	0.67
IJ	7	35.00	1.40
IP	5	25.00	1.30
EP	1	5.00	0.20
EJ	7	35.00	1.15
ST	9	45.00	1.54
SF	4	20.00	0.65
NF	4	20.00	0.88
NT	3	15.00	0.87
SJ	9	45.00	1.14
SP	4	20.00	0.97
NP	2	10.00	0.42
NJ	5	25.00	1.55
TJ	8	40.00	1.42
TP	4	20.00	1.09
FP	2	10.00	0.38
FJ	6	10.00	1.10
IN	5	25.00	1.50
EN	2	10.00	0.43
IS	7	35.00	0.27
ES	6	30.00	0.93
S dom.	3	15.00	0.51
N dom.	5	25.00	1.18
T dom.	10	50.00	2.11
F dom.	2	10.00	0.39

Chart 17: *Type Comparison of the Composite and Keyboard Emphasis*

N	Composite %		Keyboard Emphasis %	N
77	53.10	E	40.00	8
68	46.90	I	60.00	12
89	61.38	S	65.00	13
56	38.62	N	35.00	7
98	67.59	T	60.00	12
47	32.41	F	40.00	8
92	63.45	J	70.00	14
53	36.55	P	30.00	6
40	27.59	IJ	35.00	7
28	19.31	IP	25.00	5
25	17.24	EP	5.00	1
52	35.86	EJ	35.00	7
62	42.76	ST	45.00	9
27	18.62	SF	20.00	4
20	13.79	NF	20.00	4
36	24.83	NT	15.00	3
64	44.14	SJ	45.00	9
25	17.24	SP	20.00	4
28	19.31	NP	10.00	2
28	19.31	NJ	25.00	5
64	44.14	TJ	40.00	8
34	23.45	TP	20.00	4
19	13.10	FP	10.00	2
28	19.31	FJ	30.00	6
28	19.31	IN	25.00	5
28	19.31	EN	10.00	2
40	27.59	IS	35.00	7
49	33.79	ES	30.00	6
29	20.00	S Dom.	15.00	3
36	24.83	N dom.	25.00	5
61	42.07	T dom.	50.00	10
19	13.10	F dom.	10.00	2

above 1.00. When comparing the single-letter percentages, three of the woodwind (Chart 18) percentages agree with the type composite. The E and I pole of the woodwind emphasis is even at 50%, while the composite percentages are E (53.10%) and I (46.90%). When comparing the double-letters, the following percentages are larger than those in the composite IP, EP, SF, NF, NT, NP, TP, FP, FJ, IN, Sdom, Ndom, and Fdom. The combinations common to both are woodwind emphasis and the type composite are SJ at 42.11% and TJ at 36.84%.

Percussion Majors

Table 55 summarizes MBTI types for music majors whose primary performance area is percussion without regard to music degree plan (N = 8). Only two cells have more than one entry: ISTP (N = 4) and ENTJ (N = 2). The Thinking trait is prevalent in all cells with entries. All four cells with students show a positive SSR: ISTJ, ISTP, ESTJ and ENTJ. Single-letter category percentages reveal preferences for I (N = 5 at 62.50), S (N= 6 at 75.00%) and T (N = 8 at 100.00%). The J and P cells are evenly distributed at 50.00 with P having the larger index. The widest difference observed between poles is between T (N = 8 at 100.00%) and F (N = 0 at 00.00%). The prevailing double-letter combinations are IP, SP,TJ, and TP (50.00%), IS (62.50%), ST (75.00%), and T dom. (87.50%). When comparing the single-letter percentages to the composite (Chart 19), percussionists are E at 37.50% and I at 62.50%. The composite is E (53.10%) and I (46.90%) showing that this subsample contradicts the composite. T is 100% of the pole while the composite T is 67.59%. The J and P pole is evenly distributed at 50% while the type composite is J (63.45) and P (36.55%). In double-letter combinations, the following percentages are higher than those in the type composite, IP, EJ, ST, NT, SP, NJ, TJ, TP, EN, IS, and Tdom. The T trait is found in four of the groupings followed by J with three. The highest percentage common to both groupings is the TJ (50% and 44.14%

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respectively). The only significant type is ENTJ at p.=04. The only significant single-letter is T at p.=01; double letters are IP at p.=05, ST at p.=01, TP at p.=04, IS at p.=04, and Tdom at p.=001.

Table 54: *Woodwind Emphasis with SSR*

ISTJ	ISFJ	INFJ	INTJ
N= 1	N= 5	N= 1	N= 4
%= 2.63	%= 013.16	%= 2.63	%= 10.53
I= 0.28	I= 1.52	I= 0.81	I= 2.87
ISTP	**ISFP**	**INFP**	**INTP**
N= 1	N= 2	N= 2	N= 3
%= 2.63	%= 5.26	%= 5.26	%= 7.89
I= 0.59	I= 1.06	I= 0.96	I= 1.88
ESTP	**ESFP**	**ENFP**	**ENTP**
N= 1	N= 1	N= 2	N= 4
%= 2.63	%= 2.63	%= 5.26	%= 10.53
I= 0.57	I= 0.40	I= 0.57	I= 2.10
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N= 9	N= 1	N= 1	N= 0
%= 23.68	%= 2.63	%= 2.63	%= 0.00
I= 2.23	I= 0.25	I= 0.55	I= 0.00

Base Population N= 27,156. Groups are independent.

Calculated values of Chi Square *or* Fisher's exact probability (underlined).

Type table significance			
0.18	0.38	1.00	0.05*
0.73	1.00	1.00	0.41
0.73	0.52	0.58	0.12
6.84+	0.12	0.72	0.26

E	0.51	IJ	0.30	SJ	0.12	IN	2.56
I	0.51	IP	0.09	SP	0.32	EN	0.53
S	0.34	EP	0.37	NP	0.53	IS	0.29
N	0.34	EJ	0.04	NJ	0.00	ES	0.01
T	3.00	ST	0.11	TJ	1.41	Sd	1.24
F	3.00	SF	0.89	TP	0.73	Nd	1.39
J	0.09	NF	1.05	FP	1.18	Td	2.32
P	0.09	NT	3.59	FJ	0.75	Fd	2.02

	N	%	I
E	19	50.00	0.90
I	19	50.00	1.13
S	21	55.26	0.92
N	17	44.74	1.12
T	23	60.53	1.30
F	15	39.47	0.74
J	22	57.89	1.04
P	16	42.11	0.95
IJ	11	28.95	1.15
IP	8	21.05	1.10
EP	8	21.05	0.83
EJ	11	28.95	0.95
ST	12	31.58	1.08
SF	9	23.68	0.77
NF	6	15.79	0.69
NT	11	28.95	1.67
SJ	16	42.11	1.07
SP	5	13.16	0.64
NP	11	28.95	1.21
NJ	6	15.79	0.98
TJ	14	36.84	1.31
TP	9	23.68	1.29
FP	7	18.42	0.70
FJ	8	21.05	0.77
IN	10	26.32	1.58
EN	7	18.42	0.79
IS	9	23.68	0.86
ES	12	31.58	0.98
S dom.	8	21.05	0.72
N dom.	11	28.95	1.37
T dom.	13	34.21	1.44
F dom.	6	15.79	0.61

Chart 18: *Type Comparison of the Composite and Woodwind Emphasis*

	Composite		Woodwind Emphasis	
N	%		%	N
77	53.10	E	50.00	19
68	46.90	I	50.00	19
89	61.38	S	55.26	21
56	38.62	N	44.74	17
98	67.59	T	60.53	23
47	32.41	F	39.47	15
92	63.45	J	57.89	22
53	36.55	P	42.11	16
40	27.59	IJ	28.95	11
28	19.31	IP	21.05	8
25	17.24	EP	21.05	8
52	35.86	EJ	28.95	11
62	42.76	ST	31.58	12
27	18.62	SF	23.68	9
20	13.79	NF	15.79	6
36	24.83	NT	28.95	11
64	44.14	SJ	42.11	16
25	17.24	SP	13.16	5
28	19.31	NP	28.95	11
28	19.31	NJ	15.79	6
64	44.14	TJ	36.84	14
34	23.45	TP	23.68	9
19	13.10	FP	18.42	7
28	19.31	FJ	21.05	8
28	19.31	IN	26.32	10
28	19.31	EN	18.42	7
40	27.59	IS	23.68	9
49	33.79	ES	31.58	12
29	20.00	S Dom.	21.05	8
36	24.83	N dom.	28.95	11
61	42.07	T dom.	34.21	13
19	13.10	F dom.	15.79	6

Table 55: *Percussion Emphasis with SSR*

ISTJ	ISFJ	INFJ	INTJ
N= 1	N= 0	N= 0	N= 0
%= 12.50	%= 0.00	%= 0.00	%= 0.00
I= 1.32	I= 0.00	I= 0.00	I= 0.00
ISTP	**ISFP**	**INFP**	**INTP**
N= 4	N= 0	N= 0	N= 0
%= 50.00	%= 0.00	%= 0.00	%= 0.00
I= 11.17	I= 0.00	I= 0.00	I= 0.00
ESTP	**ESFP**	**ENFP**	**ENTP**
N= 0	N= 0	N= 0	N= 0
%= 0.00	%= 0.00	%= 0.00	%= 0.00
I= 0.00	I= 0.00	I= 0.00	I= 0.00
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N= 1	N= 0	N= 0	N= 2
%= 12.50	%= 0.00	%= 0.00	%= 25.00
I= 1.18	I= 0.00	I= 0.00	I= 5.66

Base Populatiaon N = 27,156. Groups are independent.

Calculated values of Chi Square *or* Fisher's exact probability (underlined).

Type table significance			
1.00	0.63	1.00	1.00
0.00	1.00	1.00	1.00
1.00	0.67	0.63	1.00
1.00	0.61	1.00	0.05*

E	0.48	IJ	0.48	SJ	0.49	IN	0.37
I	0.48	IP	0.05*	SP	0.06	EN	1.00
S	0.76	EP	0.13	NP	0.21	IS	0.04*
N	0.49	EJ	0.71	NJ	0.62	ES	0.29
T	9.20+	ST	8.12+	TJ	0.23	Sd	0.45
F	0.00	SF	0.12	TP	0.04*	Nd	0.22
J	1.00	NF	0.21	FP	0.12	Td	17.99#
P	1.00	NT	0.63	FJ	0.12	Fd	0.12

	N	%	I
E	3	37.50	0.67
I	5	62.50	1.41
S	6	75.00	1.25
N	2	25.00	0.62
T	8	100.00	2.15
F	0	0.00	0.00
J	4	50.00	0.90
P	4	50.00	1.12
IJ	1	12.50	0.50
IP	4	50.00	2.61
EP	0	0.00	0.00
EJ	3	37.50	1.23
ST	6	75.00	2.57
SF	0	0.00	0.00
NF	0	0.00	0.00
NT	2	25.00	1.44
SJ	2	25.00	0.64
SP	4	50.00	2.43
NP	0	0.00	0.00
NJ	2	25.00	1.55
TJ	4	50.00	1.78
TP	4	50.00	2.73
FP	0	0.00	0.00
FJ	0	0.00	0.00
IN	0	0.00	0.00
EN	2	25.00	1.07
IS	5	62.50	2.27
ES	1	12.50	0.39
S dom.	1	12.50	0.43
N dom.	0	0.00	0.00
T dom.	7	87.50	3.69
F dom.	0	0.00	0.00

Chart 19: *Type Comparison of the Composite and Percussion Emphasis*

	Composite		Percussion Emphasis	
N	%		%	N
77	53.10	E	37.50	3
68	46.90	I	62.50	5
89	61.38	S	75.00	6
56	38.62	N	25.00	2
98	67.59	T	100.00	8
47	32.41	F	0.00	0
92	63.45	J	50.00	4
53	36.55	P	50.00	4
40	27.59	IJ	12.50	1
28	19.31	IP	50.00	4
25	17.24	EP	0.00	0
52	35.86	EJ	37.50	3
62	42.76	ST	75.00	6
27	18.62	SF	0.00	0
20	13.79	NF	0.00	0
36	24.83	NT	25.00	2
64	44.14	SJ	25.00	2
25	17.24	SP	50.00	4
28	19.31	NP	0.00	0
28	19.31	NJ	25.00	2
64	44.14	TJ	50.00	4
34	23.45	TP	50.00	4
19	13.10	FP	0.00	0
28	19.31	FJ	0.00	0
28	19.31	IN	0.00	0
28	19.31	EN	25.00	2
40	27.59	IS	62.50	5
49	33.79	ES	12.50	1
29	20.00	S Dom.	12.50	1
36	24.83	N dom.	0.00	0
61	42.07	T dom.	87.50	7
19	13.10	F dom.	0.00	0

Interpretations

The numbers in most subsample cells are very small thus restricting interpretation. Some subgroups, however, showed amazing homogeneity. All percussionists, for example, were "thinkers." While one cannot generalize from such limited information, this trait appeared in students from four schools in differing areas of the country. The institutions they attended were different and the fact that all of them shared a common trait is an important observation. Also, Lanning found no such unanimity among the percussionists in her study which lends some credence to the initial concern that the personalities of African American music students might not agree with their counterparts in the general population of music students.[8]

CAPT databank projections indicated that the majority of African American males are type ESTJ and the majority of females are type ESFJ. The subjects in this study differed from those projections. The males in the sample were predominantly ISTJ. Also, the females in the sample were considerably more "thinkers" than predicted. CAPT predicted that males and females would be ESJ, differing only on the thinking/feeling trait. Sample data did not confirm this prediction. Females were also thinkers. Therefore, one can conclude that African American music majors are consistent with the base population on three of the four traits. Since the females in the sample tended more to thinking than feeling which was not predicted by CAPT data, one can conclude that female African American music majors differ from the general population on this trait. The males in the sample preferred thinking at a rate four times greater than feeling. Therefore, one can conclude that male African American music majors differ from the general population on this trait. All subjects were more judgmental than predicted by CAPT data, meaning the observed percentages were greater than the expected percentages. Therefore, one can

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[8] Alice M. Lanning, "Personality Characteristics of Undergraduate Music Majors in Selected Oklahoma Universities: An Investigation of Relationships

conclude that African American music majors differ from the general population on this trait. The males in the sample were predominantly ISTJ, agreeing with CAPT predictions on three of the four traits and differing on one. This means that, as a total sample, the males are serious, quiet students who make up their own minds about what should be accomplished and work toward it steadily, regardless of protests or distractions. The males were quite homogeneous in type dominance with the exceptions of the students at Schools C and E where the extroverted trait re emerged. Why students clustered as extroverts at these two schools is not easy to explain. These are the only two schools where performance auditions and placement exams in music theory are required as part of entrance and placement criteria. These academic hurdles may require a more aggressive, outward thinking individual who does not mind the public display of performance skill and the academic challenge of the entrance exam.

The females in the sample were ESTJ, agreeing with CAPT predictions on three of the four traits and differing only on the the thinking/feeling trait. This means that, as a whole, these students are practical, realistic, matter-of-fact, and like to organize and run activities.

Finally, the data in this study support earlier findings on one important element. All subjects in this study are like music majors in Lanning's and Henderson's study in that the sensing and judment traits are dominant. Given the demand on music major's to make aesthetic judgments about their academic and technical progress as musicians, it seems only appropriate that these traits would dominate.

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as Measured by the Myers-Briggs Type Indicator." Ph. D. dissertation, University of Oklahoma, 1990, p. 307.

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CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to ascertain personality characteristics of undergraduate music majors at historically African-American colleges and universities utilizing Form G of the Myers-Briggs Type Indicator (MBTI). The investigation of was guided by the following question:

How does the Myers-Briggs Type Indicator define and differentiate the personality types of undergraduate minority music majors at historically African-American colleges and universities:

        a.) by music degree emphasis?

        b.) by applied study area?

        c.) by gender?

145 students (seventy-three males and seventy-two females) from six institutions of higher education formed the research sample. Only traditional college age students (ages eighteen through twenty-four) enrolled as full-time music degree students were subjects. After personally administering and grading all test forms, the author constructed MBTI type tables for the composite and all subsamples that contained the frequency percentages for each of the sixteen types and each single and double-letter combination. A Self-Selection

Ratio (I) was computed using information in the CAPT databank as the comparison or base population. To determine the degree of significance for each type and single and double-letter combination, Chi Square or Fisher's Exact Probability tests were computed as appropriate. Subsamples were grouped as follows: gender, degree track (Bachelor of Music or Bachelor of Music Education), and applied performance area (brass, woodwind, voice, keyboard/strings, percussion).

Conclusions

CAPT databank projections indicated that the majority of African-American males should be type ESTJ. The males in this study differed from those projections. They were predominantly ISTJ, meaning in CAPT's teminology that the males in the sample are persons who are

> ...serious, quiet, earn success by concentration and thoroughness. [They are] practical, orderly, matter-of-fact, logical, realistic, and dependable, see to it that everything is well organized, take responsibility, make up their own minds as to what should be accomplished and work toward it steadily, regardless of protests or distractions.[1]

On the remaining three personality categories, the sample males agreed with CAPT predictions. Subsamples of males by institution did reveal some differences. The males were quite homogeneous in type dominance with the exceptions of the students at Schools C and E where the extroverted trait re emerged. Why students clustered as extroverts at these two schools is not easy to explain. These are the only two schools where performance auditions and placement exams in music theory are required as part of entrance and placement criteria. These academic hurdles may require a more aggressive, outward thinking individual who does not mind the public display of performance skill and the academic challenge of the entrance exam.

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[1] Isabel Briggs Myers and Peter B. Myers, *Gifts Differing--Understanding Personality Type.* (Consulting Psychologists Press, Inc. 1993) p. 20.

The data provide tentative support for the idea that African-American male music majors cluster by instrument type as well. All eight percussioinists were Thinking, while six were Sensing. These BME percussion majors placed four students in the ISTP cell.

The importance of these data for academic counselors is the general implication that African-American males are more introverted than their cohorts and are quite homogeneous in some applied music areas. Realizing this may assist in discussing curricular options. Counselors may be able to predict some academic success by recognizing the peronality characteristics of these instrumentalists. Naturally, to a practicing MBTI counselor such claims must be considered cautiously. Each student's type is a personal assessment the implications of which can be mitigated by a host of other motivating variables that may affect individual success. Also, the very premise of Jung's psychology and the MBTI is that trait stength and dominance change. It is possible that those who recognize their basic type may adjust their personality characteristics, upon entering an academic area to meet the characteristics and demands their cohorts and professional interests place on them.

CAPT databank projections indicated that the majority of African-American females should be type ESFJ. The females in the sample exhibited greather strength in thinking than in feeling. The majority were ESTJ, agreeing with CAPT on three categories and differing only on the thinking/feeling category. Both males and females in the sample were predominantly sensing and judging types. Since this was predicted by CAPT, one can conclude that African-American music majors are consistent with the base population on these traits. The males in the sample preferred thinking at a rate four times greater than feeling. Therefore, one can conclude that male African-American music majors differ from the base population on the strength of this trait.

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The females in the sample were ESTJ, agreeing with CAPT on three traits and differing on one. This means that, as a whole, these students are

> ...warm-hearted, talkative, popular, conscientious, born cooperators, active committee members, who need harmony and may be good at creating it, always doing something nice for someone, work best with encouragement and praise, and are mainly interested in things that directly and visibly affect people's lives.[2]

The first research question was "How does the MBTI define and differentiate the personality types of undergraduate minority music majors at historically African-American colleges and universities by specific music degree plan?" Students enrolled in the Bachelor of Music degree plan (see Table 49, p. 83) were predominantly ISTJ rather than the expected ESTJ. This masks an important point. The number of males enrolled in this degree plan greatly outweighed the number of females. Therefore, the predominantly introverted males skewed the results, implying that all students in a performance degree plan were introverted when the result is merely the outcome of the numbers of men and women enrolled in that degree. By contrast, students enrolled in the Bachelor of Music Education degree (see Table 50, p. 85) were predominantly ESTJ. Since the majority of females in the sample were enrolled in this degree plan their numbers skewed the results, implying all students were extroverts when the level of that trait followed gender lines specifically. Therefore, it is difficult to conclude that any MBTI type differences in the two degree plans can be attributed to any variable other than gender.

The second portion of question one investigated personality type differences by applied area. The sample was divided into five areas brass, percussion, voice, keyboard/strings, and male and female woodwind majors. The dominant personality type for brass instrument players was ISTJ (see Table 51, p. 88), ESTJ for voice (see Table 52, p. 92), ISTJ for keyboard/strings (see Table 53, p. 94) and ISTJ for the male and female woodwind music majors (see Table 54, p. 98). Again the dominating trait of

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[2] Ibid. , p. 20.

introversion/extroversion is a result of the gender of the persons enrolled in each category. More women than men were voice majors, therefore that category leaned toward extroversion. Since men outnumbered women in the other categories, the tendency was toward introversion. In two categories the students were evenly distributed. Voice majors on the thinking/feeling trait and woodwind majors on the extroversion/introversion trait were evenly distributed at 50%. CAPT predictions for these categories was ESTJ. Therefore, the categories differed only on the extroversion/introversion category only. The voice majors male/female were the only group where the observed type matched the predicted type ESTJ.

In answer to the third portion of question one, how do personality types differ by gender, the sample male type was ISTJ and the sample female type was ESTJ. CAPT predictions were ESTJ for males and ESFJ for females. The males (see Table 8, p. 31) differed only on extroversion/introversion from the base population while the females (see Table 11, p. 35) differed from the base population only on thinking/feeling. The dominant introversion trait for males is unique. CAPT, Lanning, and Henderson found the males in their studies to be extroverts. Since this study was the first to examine MBTI types among African-American male music majors, this is an important observation.

In conclusion, the MBTI types of undergraduate African-American music majors in this study differed somewhat by institution, but were closely related to the expected outcome model (ESTJ) predicted from CAPT data. The observed differences in degree plan and applied performance area were attributable to the gender of the majority persons enrolled rather than any other discernible variables. Sensing and thinking traits (ST) prevailed throughout the sample, indicating some consistency among all students studying music.

Recommendations for Further Study

Students attending the 144 historically African-American colleges and universities in this country are an untapped source of information when considering personality type testing. CAPT is interested in the data from this study to enhance its limited materials pertaining to African-Americans. To further aid in compiling minority holdings, researchers should focus on the personality dynamics of the various music ensembles housed within music department such as concert choirs, symphonic and marching bands, gospel choirs, stage bands, etc. These ensembles mix music and non-music majors whose personality types have never been compared. One could determine those types that are attracted to the musical and social offerings these specific ensembles provide as well as any patterns that might exist in student membership. Additional areas for future research involve African-American performers (classical or jazz) and teachers of music in public schools, colleges, and universities. Such investigations would help ascertain the personality types appropriate to specific occupations.

The Myers-Briggs Type Indicator has proven to be an important mechanism for counselors, educators, and researchers in the medical/clinical fields. Further investigation of African-American personality types is needed to help bridge gaps in counseling and employment that exist in our culture.

APPENDIX A

Copy of Department Chairperson Confirmation Letter

Dear Colleague:

This letter is to confirm your willingness to provide time and a place for your music majors to complete the Myers-Briggs Type Indicator (MBTI) measurement. The following is a summary of information necessary to complete the testing.

1. Students will need approximately 45 minutes total time to take the test.

2. Each student will be asked to provide grade point average, academic major, gender, major applied area. Copies of the answer sheet (information section) and additional information sheets are attached. These two forms need to be completed before testing begins.

3. As stated in my earlier correspondence, if students are interested in receiving their results, there is a place on the answer sheet to indicate so. You will however, receive all of the information about your students and their MBTI measurements once the data collection process is completed.

Please be reasurred that the interest in data collection is strictly for comparisons free of any references to any specific student subjects. Complete confidentiality is assured. Information you receive will apply to those students enrolled in your institution.

Sincerely,

Mark W. Phillips
Prairie View A & M University
Department of Music

APPENDIX B

Demographic Sheet Copy

Number_____

YOUR NAME IS NOT REQUIRED ON THIS FORM. The test booklet, answer sheet, and this form have a number written in the upper left corner. This number will us to keep forms together. Be sure the numbers on your test booklet, answer shweet, and this sheet are identical.

Please complete the information section below. This will allow correlation of personality types with demographic data.

DEGREE PROGRAM - Check the appropriate space(s).

_____ Bachelor of Music (performance)

_____ Bachelor of Music (composition, history, theory)

_____ Bachelor of Music Education

_____ Instrumental

_____ Vocal

_____ Combined
_____ Bachelor of Musical Arts

_____ Bachelor of Fine Arts in Music

_____ Other

MAJOR APPLIED INSTRUMENT - Please specify instrument or voice type.

_____

PREPARATORY INFORMATION - Check the appropriate spaces.

1. Did you have any theory courses in your high school training?

_____ Yes _____ No

  a. If you answered "Yes," how many semesters did the course meet?

_____ 1 _____ 2 _____ 3 _____ 4

2. Did you study your major instrument/ voice privately during your high school years?

_____ Yes _____ No

If your answer is "Yes," how many years did you study privately?

_____ 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ more

GRADE POINT AVERAGES - Add the approriate information.

High School: _____

Overall College: _____

Theory: _____

History/Lit. _____

Music Ed: _____

If you do not know your grade point averages, will you allow us to look them up in student records?

_____

(Mr. or Ms.) Last Name   First Name   Middle Initial

          -    -

_____

(Social Security Number)

APPENDIX C

CAPT Databank for Males and Females

Type Table 56: *MBTI Types - Males - Traditional Age College Students*
CAPT Databank. N = 12,637

ISTJ	ISFJ	INFJ	INTJ
N = 1577	N = 687	N = 335	N = 683
% = 12.48	% = 5.44	% = 2.65	% = 5.40
ISTP	ISFP	INFP	INTP
N = 860	N = 517	N = 672	N = 838
% = 6.81	% = 4.09	% = 5.32	% = 6.63
ESTP	ESFP	ENFP	ENTP
N = 849	N = 557	N = 791	N = 855
% = 6.72	% = 4.41	% = 6.26	% = 6.77
ESTJ	ESFJ	ENFJ	ENTJ
N = 1619	N = 690	N = 377	N = 730
% = 12.81	% = 5.46	% = 2.98	% = 5.78

Type Table 57: *MBTI Types - Females - Traditional Age College Students*
CAPT Databank. N = 14,519

ISTJ	ISFJ	INFJ	INTJ
N = 996	N = 1665	N = 550	N = 314
% = 6.86	% = 11.47	% = 3.79	% = 2.16
ISTP	**ISFP**	**INFP**	**INTP**
N = 356	N = 834	N = 823	N = 304
% = 2.45	% = 5.74	% = 5.67	% = 2.09
ESTP	**ESFP**	**ENFP**	**ENTP**
N = 408	N = 1210	N = 1705	N = 508
% = 2.81	% = 8.33	% = 11.74	% = 3.50
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N = 1260	N = 2185	N = 932	N = 469
% = 8.68	% = 15.05	% = 6.42	% = 3.23

Type Table 58: *MBTI Types - Black Males - Howard and Meharry*
CAPT Databank. N = 434

ISTJ	ISFJ	INFJ	INTJ
N = 44	N = 21	N = 11	N = 30
% = 10.14	% = 4.84	% = 2.53	% = 6.91
ISTP	ISFP	INFP	INTP
N = 21	N = 5	N = 5	N = 25
% = 0.83	% = 1.15	% = 1.15	% = 5.76
ESTP	ESFP	ENFP	ENTP
N = 19	N = 7	N = 13	N = 15
% = 4.38	% = 1.61	% = 0.37	% = 3.49
ESTJ	ESFJ	ENFJ	ENTJ
N = 98	N = 37	N = 24	N = 59
% = 22.58	% = 8.53	% = 5.93	% = 13.59

Type Table 59: *MBTI Types - Black Females - Howard and Mcharry*
CAPT Databank. N = 41

ISTJ	ISFJ	INFJ	INTJ
N = 5	N = 2	N = 1	N = 3
% = 12.20	% = 4.88	% = 2.44	% = 7.32
ISTP	ISFP	INFP	INTP
N = 0	N = 1	N = 5	N = 4
% = 0.0	% = 2.44	% = 12.20	% = 9.76
ESTP	ESFP	ENFP	ENTP
N = 0	N = 0	N = 2	N = 2
% = 0.0	% = 0.0	% = 4.88	% = 4.88
ESTJ	ESFJ	ENFJ	ENTJ
N = 6	N = 6	N = 2	N = 2
% = 14.63	% = 14.63	% = 4.88	% = 4.88

Type Table 60: *MBTI Types - Males and Females*
CAPT Databank. N = 27,156

ISTJ N = 2,573	ISFJ N = 2,352	INFJ N = 885	INTJ N = 997
ISTP N = 1,216	ISFP N = 1,351	INFP N = 1,495	INTP N = 1,142
ESTP N = 1,257	ESFP N = 1,767	ENFP N = 2,496	ENTP N = 1,363
ESTJ N = 2,879	ESFJ N = 2,875	ENFJ N = 1,309	ENTJ N = 1,199

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