

The Distribution of MBTI Types In the US by Gender and Ethnic Group

Allen L. Hammer
Consulting Psychologists Press

Wayne D. Mitchell
University of Alaska

A long-awaited national sample, matched on gender and ethnicity to the 1990 US census, shows that in adults: introverts slightly outnumber extraverts; about two-thirds of people prefer sensing; about two-thirds of men prefer thinking, while more than six in ten women prefer feeling; and up to six in ten people prefer judging. ISTJ and ISFJ comprise over one-quarter of the adult population. African Americans have significantly increased proportions of S and T, Hispanic Americans show a little more F, and children aged 11-17 may show more E, a more nearly equal split on S-N, and more P. While not perfect, these norms are now the best estimate of the type distribution in the general adult population of the US.

Abstract

The type preferences of a national (US) sample stratified by gender, ethnicity, and geographic location were obtained from 1,267 adults aged 18 to 94 who completed Form G of the MBTI between 1988 and 1991. This sample was randomly selected from a larger sample to match as closely as possible the gender by ethnicity breakdown of the US 1990 Census. Compared to three previous estimates of type percentages in the population, the present sample provides the closest approximation to the type table that might be obtained from a national random sample. Contrary to previous estimates, this sample suggests that (1) the US adult population is nearly evenly divided between Es and Is; and (2) the dominant function for 27% of adults is introverted sensing. In concordance with earlier estimates, nearly 60% preferred judging, two-thirds of males preferred thinking, and three-fifths of women preferred feeling. Separate type tables are also provided for Whites, African Americans, Hispanics, and children under 18. It is recommended that the type and preference frequencies from these samples be used whenever type data for the general population are needed for comparison.

Most people who complete the MBTI are curious about the relative frequency of their own type. Researchers also are interested in the distribution of types, because they often need a base population against which to compare the type distributions in their own samples. Such information can help them determine whether certain types or preferences in their samples are over- or underrepresented, or how dependent their results might be on the distribution of types in the specific sample they are studying. Since MBTI raw scores are not converted to standard

scores as are the scores of many trait instruments, the preference score or continuous score that is used to report results cannot be used to make a direct comparison to some normative group.

In workshops and training seminars, many practitioners use the informal estimate of type frequencies provided in the *MBTI Manual* (Myers & McCaulley, 1985). This estimate states that in the general population, about 75% of people prefer E and S, and about 55-60% prefer J. On the T-F scale, the estimate states that about 60% of men prefer T and 65% of the

women F. Although these estimates are repeated in many MBTI presentations, it is interesting to note that even Myers' high school data do not support the expected 3:1 ratio of Es to Is, a fact acknowledged in the *Manual*. In the combined male and female high school sample of 9,320 students, the proportion of Es was only 65%, rather than the 75% that would be expected (McCaulley, Macdaid, & Kainz, 1985).

Researchers who need a more precise estimate of type frequencies in a general population primarily use either the Myers high school sample or the CAPT data bank for comparison. Although rarely used, a third population estimate is also available. This is the sample collected by Stanford Research Institute (SRI) as part of their Values and Life Styles program, which is reported in the *MBTI Manual* (Myers & McCaulley, 1985). The distribution of types for men and women separately in each of these three samples is summarized in McCaulley et al. (1985), in the *MBTI Manual*, and in the *Atlas of Type Tables* (Macdaid, McCaulley, & Kainz, 1986), which includes type tables for total combined samples as well as for men and women's samples separately. Unless otherwise noted, the percentages quoted below refer to total samples from each source (i.e., men and women combined) as found in the *Atlas of Type Tables*. These percentages are shown in Table 1.

The most striking difference between these three population estimates is in the proportion of Es and Is. Myers' sample of high school students ($N = 9,320$) collected in 1957, shows about 65% Es and 35% Is. The CAPT data bank ($N = 232,557$) shows a more equal distribution, with 53% Es and 47% Is. In the SRI sample ($N = 1,105$), the Is (60%) are more frequent than the Es (40%). In all three samples, the proportion of Is is higher among men than among women. Although there are also large differences in the proportion of S and N types across the samples, the S-N discrepancy is due primarily to the large percentage of Ns in the CAPT data bank. In all three populations, Ss outnumber Ns, with the percentage of S being 76% in the SRI sample, 68% in the Myers high school sample, and 54% in the CAPT sample. On the T-F scale, men are more likely to express a preference for T: 70% in the CAPT Form G data bank, 75% in the SRI sample, and 61% among Myers' high school students. All three samples also show more women having a preference for F: 68% among high school students, 66% in the SRI sample, and 58% in the CAPT Form G data bank. All samples show more people with a preference for J than P: 66% in the SRI sample, 57% in the total CAPT data bank, and 55% in Myers' high school sample.

Considering the types individually, Myers' high school sample showed ESTJ (15%) and ESFJ (14%) to be the most frequent types and INFJ (2%) the least frequently occurring type. In the SRI sample, the

most frequently occurring types were ISTJ (19%) and ISFJ (16%). In the CAPT data bank, ENFP was the modal type at 11%, followed closely by ESFJ, ISTJ, ISFJ and ESTJ, all over 9%.

Each of these population estimates suffers from various limitations. The Myers high school sample appears to be the most severely limited because it was drawn from selected schools from only one city. According to McCaulley et al. (1985), the CAPT data bank "has a bias, of undetermined amount, toward Introversion and Intuition" (p. 3), which is believed to result from the method by which cases are added to the data bank; the method favors persons with higher levels of education, who tend to be I and N types. According to McCaulley et al., the SRI sample was based on a national random sample of households with telephones (excluding military and other institutions) in 300 counties across the United States. The response rate was 55%, and the final sample was comprised of 446 men and 659 women. Although acknowledging that this sample comes closest to a nationwide random sample, McCaulley et al. also claimed that it is "somewhat biased toward more affluent groups" (p. 5). However, this judgment does not seem warranted if the description of the sampling procedure is accurate. Any bias in this sample may instead be a function of the response rate.

All three of the population estimates may also be limited, at least for use as base populations in current research, because of when the samples were collected: Myers collected her samples in 1957, the CAPT data bank includes cases entered from March 1978 through 1982, and the SRI study was conducted in 1983. The fact that the samples are dated does not necessarily make them invalid. However, in the absence of longitudinal studies of type, it is not known whether type distributions change over time, and if so, what might effect such changes.

As a final note on the estimates, we tend to agree with McCaulley and her colleagues (McCaulley et al., 1985) that the SRI sample was, at least in 1985, probably the best estimate of the true proportion of MBTI preferences and types in the US population. Given this conclusion, it is indeed curious that virtually no studies of type distributions published since 1985 have used the SRI data for comparison.

Because of the discrepancies between the three population estimates and their inherent limitations, Consulting Psychologists Press (CPP) responded in 1988 to an opportunity to collect another estimate. The opportunity arose when another test publisher, American Guidance Service, asked to administer the MBTI to a national representative sample as part of the standardization of a new intelligence test. CPP granted the request and supplied the necessary materials, and the data were returned to CPP for analysis.

Method

Sampling Procedure. The MBTI Form G was administered to a national sample as part of the norming of the Kaufman Adolescent and Adult Intelligence Test (KAIT; Kaufman & Kaufman, 1992), published by American Guidance Service. The KAIT standardization program was carried out between April 1988 and October 1991. A stratified multistage sampling procedure was employed to collect the data. A sampling plan was developed by first determining how many people were to be sampled in 13 age groups ranging from 11 to 85+. The sample within each age group was then stratified by gender, geographic region (based on the four major geographic regions used by the US Census Bureau: Northeast, North Central, South, and West), socioeconomic status (indexed by the respondent's education or by the level of education of his or her parents), and race. Sixty test sites were chosen at random from within each of the four geographic regions, which resulted in data being collected from sites in 27 states. (See the KAIT manual for a list of the specific states and sites.) The data collection was organized and monitored by 120 site coordinators who were familiar with test administration and data collection. Each coordinator was given targets for gender, age, and ethnic group representation but otherwise was free to collect data from any available sources. Most of the children in the sample were administered the MBTI (although some of the younger children were administered the Murphy-Meisgeier Type Indicator for Children [MMTIC; Meisgeier & Murphy, 1987]) through contacts with schools. The sampling plan resulted in data being collected from about 2,600 persons aged 11 to 94. From this dataset, 2,000 people were randomly selected as the standardization sample for the KAIT in order to match the Census.

Originally, the goal was to administer the KAIT along with the MBTI to each person in the sample. The Strong Interest Inventory and some additional forms were also to be administered to a portion of the sample. However, in practice fewer people were administered the MBTI than were administered the KAIT. MBTI results were not available from about 200 of the 2,000 people in the standardization sample because of a concern that developed during data collection based on a small number of individuals who balked at the request to respond to so many items. When this concern surfaced, site coordinators were given permission to use their discretion in assigning additional tests after the KAIT. In most cases, this was done by asking people to volunteer to take as many instruments as they wanted after completing the KAIT (G. McCloskey, personal communication, April 1993). This procedure resulted in relatively more White females volunteering to take additional

instruments. Overall, approximately 1,800 people were administered either the MBTI or the MMTIC along with the KAIT.

Analysis. The first step in preparing the dataset for analysis was to determine the percentages of people in the 1990 Census for each combination of gender and ethnicity. It was desirable to have separate norms for adults and children, and so two datasets were created, one for persons less than 18 years of age and the other for adults. The next step was to construct a dataset for the adults, configured so that the percentages in the final sample matched the percentages of people in the gender by ethnicity categories in the census data. To minimize the possibility of sampling error in selecting from the subject pool, we planned to draw multiple random samples, each targeted to the census percentages, and then to compute the mean number of each type across all of the multiple random samples. However, after observing that the gender by ethnicity percentages in the dataset already closely matched the census data, with the exception of White females, it was determined that multiple random samples would produce virtually no variation in the number of each type in the samples. Therefore, the procedure used was to choose multiple random samples only of White females for removal from the dataset.

However, before this procedure was conducted, a problem in the classification of Hispanics had to be resolved. The demographic questionnaire used by AGS did not treat Hispanics in the same manner as did the US Census. The Census asked about Hispanic origin in a question separate from the ethnicity question, and the results were reported in a separate table that cannot be directly compared to the ethnicity tables. Respondents to the Census questionnaire were first asked to identify themselves as being a member of one of the following ethnic groups: White, Black, American Indian, Eskimo or Aleut, Asian or Pacific Islander, and Other. All respondents were then given an opportunity in a separate question to report whether they were of Hispanic origin. Therefore, the Hispanic category does not appear in the Census ethnicity table that was used as the target; a footnote to the table indicated that "Hispanics can be of any race."

In contrast, the demographic questionnaire used by AGS included Hispanic as one of the ethnic groups that respondents could select. Since questions are often asked about the distribution of MBTI types among Hispanics, it was desirable to have Hispanics included in the final set of norms. To accomplish this, given the discrepancy between the AGS and the Census questionnaires, Hispanics were apportioned among the Black and White ethnic groups by gender. Male Hispanics were randomly assigned to the

Black male and White male categories, and female Hispanics to the Black female and White female categories, in proportion to the percentage of those categories in the final sample. It was assumed that subjects from the Black and White ethnic categories were most likely to have claimed Hispanic origin; it was considered less likely that many Pacific Islanders or Eskimos/Aleuts would report being of Hispanic origin. All of the type tables reported later reflect this apportionment. However, because of the interest in the type distribution of Hispanics, all individuals in the final sample who claimed such an origin are also reported in a separate type table. When considering the Hispanic data, it should be noted that all participants were administered the English version of the MBTI. Therefore, the Hispanics in this sample probably do not represent the Hispanic population of the US and certainly cannot be said to represent Hispanics in other countries.

Once the Hispanic men and women were allocated to the Black and White men and women's categories, according to the proportion of Blacks and Whites in the Census, one hundred random samples of White females of $N = 550$ each were drawn. The numbers of each type were averaged across these 100 random samples, which became the target number of each type in the final sample. White females were then randomly removed from the dataset until the numbers of each type matched these targets. For most types, the averages of the random samples do not vary by more than one or two percentage points.

Table 2 shows the percentages of the gender by ethnic group categories in the final sample compared to the percentages in the 1990 US Census. The percentages of White and Black males are almost identical; there are slightly more females in the CPP sample, and fewer in the "other" category, than represented in the Census figures. Our sample was not large enough to yield meaningful percentages by gender under the "other" ethnic category.

Table 3 shows percentages for age ranges for the CPP sample and the 1990 US Census. Because this table only includes people aged 18 and over, the Census percentages have been adjusted to reflect this same age range. That is, the Census percentages for each age bracket reflect the proportion of people in that bracket relative to the total US population aged 18 and over. In the CPP sample, the percentage in the 18-19-year-old bracket is about double that found in the US population, whereas the 30-39-year-old bracket is somewhat underrepresented. For all other age groups, the percentages differ by less than 2%. The mean age for the CPP sample was 42.2 years and the median was 39 years.

Table 4 shows the highest grade completed by subjects in the CPP sample. Fourteen percent of the sample completed less than 12 years of school, 34%

completed high school, and 51% completed at least 1 year of college. A direct comparison of the educational level of this sample with that of the data from the US Census was not possible because the educational levels in the Census are reported for a different age group than used in the CPP sample (US Census Bureau, 1990). The Census data show that 80% of adults aged 25 and over have at least completed high school, 45% have completed at least some college, and 22% have at least a bachelor's degree. Using only the people in the CPP sample aged 25 and older, the comparable figures are: 84% have at least a high school diploma, 48% at least some college, and 27% at least a college degree. This indirect comparison suggests that the CPP sample probably has a somewhat higher educational level, on average, than people in the general US population.

Results

The distribution of types and preferences for the total CPP adult norm sample is shown in Table 5. There are more Is (54%) than Es (46%); slightly more than two-thirds are Ss (68%); just over half are Ts (53%); and nearly three-fifths (58%) prefer J. The two most frequent types are ISTJ (16%) and ISFJ (12%); consequently, the dominant function for over 25% of the sample is introverted sensing. The least frequent types are ENFJ (3%) and INFJ (3%).

The distribution of types and preferences for men and women separately are shown in Tables 6 and 7. Slightly more women preferred S (71%) than did men (64%). About 69% of men preferred T, whereas less than a third preferred F (31%). In contrast, two-fifths of women preferred T (39%) and three-fifths (61%) preferred F. Slightly more women preferred J (61%) compared to men (55%). For both men and women, introverted sensing was the most frequent dominant function. Despite the fact that there were more Is than Es for both genders, there were almost twice as many dominant extraverted Ns as dominant introverted Ns among both men and women. For men, the remaining dominant functions were about equally divided between introverted and extraverted forms. However, for women, there were over half again as many who preferred extraverted feeling (18%) as introverted feeling (11%).

The distributions of types and preferences for Whites, African Americans, and Hispanics are shown in Tables 8, 9, and 10, respectively. The distribution in the sample of Whites is very similar to that of the total sample, which it should be, since Whites comprise 81% of the total. However, it can be observed that there are slightly more Is and slightly fewer Ss, Ts, and Js among Whites than in the total sample. The modal type in the White sample is ISTJ at 14.7%. Most of the differences in the White versus the total

Table 1. Percentage of MBTI Preferences in Three Population Estimates.

	E	I	S	N	T	F	J	P
CAPT	53%	47%	54%	46%	42%	58%	57%	43%
Myers	65%	35%	68%	32%	48%	52%	55%	45%
SRI	40%	60%	76%	24%	50%	50%	66%	34%

Sources: CAPT: CAPT databank total population ($N = 232,557$); *MBTI Atlas of Type Tables*, p. 47.
 Myers: High school students from Pennsylvania ($N = 9,320$); *MBTI Atlas of Type Tables*, p. 41.
 SRI: Total SRI sample ($N = 1,105$); *MBTI Atlas of Type Tables*, p. 44.

Table 2. Percentages of Gender and Ethnic Group Combinations In the CPP Adult Sample and in the US Census.

Group	N in CPP Sample	Percentage of CPP Sample	Percentage in US Census
White Males	518	40.9%	39.2%
Black Males	72	5.7%	5.7%
White Females	550	43.4%	41.1%
Black Females	105	8.3%	6.4%
Other	22	1.7%	7.6%
TOTAL	1,267	100.0%	100.0%

Table 3. Percentages in Each Age Range in the CPP Adult Sample and in the US Census.

Age Range	Percentage of CPP Sample	Percentage in US Census
18-19	9.9%	4.2%
20-29	22.9%	21.8%
30-39	17.8%	22.6%
40-49	15.9%	17.0%
50-59	12.6%	11.8%
60-69	10.5%	11.2%
70-79	8.0%	7.6%
80 and over	2.0%	3.8%

Table 4. Highest Grade Completed in the CPP Adult Sample.

Highest Grade Completed	Frequency	Percentage
1 or 2	2	0.2 %
3	4	0.3%
4	5	0.4%
5	2	0.2%
6	8	0.6%
7	9	0.7%
8	43	3.4%
9	24	1.9%
10	27	2.1%
11	53	4.2%
12	431	34.0%
1 year of college	107	8.4%
2 years of college	136	10.7%
3 years of college	96	7.6%
4 years of college	131	10.3%
Graduate work	173	13.7%
Missing	16	1.3%

**Table 5. Type Distribution of
Total CPP Adult Norms.**
N = 1,267 + = 1% of N

The Sixteen Complete Types				Dichotomous Preferences	
ISTJ n = 198 (15.6%) +++++ +++++ +++++ +	ISFJ n = 146 (11.5%) +++++ +++++ ++	INFJ n = 33 (2.6%) +++	INTJ n = 44 (3.5%) ++++	E n = 587 (46.3%)	I n = 680 (53.7%)
				S n = 863 (68.1%)	N n = 404 (31.9%)
				T n = 670 (52.9%)	F n = 597 (47.1%)
				J n = 736 (58.1%)	P n = 531 (41.9%)
				Pairs and Temperaments	
ISTP n = 81 (6.4%) +++++ +	ISFP n = 57 (4.5%) +++++ +	INFP n = 55 (4.3%) ++++	INTP n = 66 (5.2%) +++++	IJ n = 421 (33.2%)	IP n = 259 (20.4%)
				EP n = 272 (21.5%)	EJ n = 315 (24.9%)
				ST n = 466 (36.8%)	SF n = 397 (31.3%)
				NF n = 200 (15.8%)	NT n = 204 (16.1%)
ESTP n = 61 (4.8%) +++++ +	ESFP n = 72 (5.7%) +++++ +	ENFP n = 80 (6.3%) +++++ +	ENTP n = 59 (4.7%) +++++	SJ n = 592 (46.7%)	SP n = 271 (21.4%)
				NP n = 260 (20.5%)	NJ n = 144 (11.4%)
				TJ n = 403 (31.8%)	TP n = 267 (21.1%)
				FP n = 264 (20.8%)	FJ n = 333 (26.3%)
ESTJ n = 126 (9.9%) +++++ +++++	ESFJ n = 122 (9.6%) +++++ +++++	ENFJ n = 32 (2.5%) +++	ENTJ n = 35 (2.8%) +++	IN n = 198 (15.6%)	EN n = 206 (16.3%)
				IS n = 482 (38.0%)	ES n = 381 (30.1%)
				ET n = 281 (22.2%)	EF n = 306 (24.2%)
				IF n = 291 (23.0%)	IT n = 389 (30.7%)

Jungian Types (E)		Jungian Types (I)		Dominant Types				
n	%	n	%	n	%			
E-TJ	161	12.7%	I-TP	147	11.6%	Dt. T	308	24.3%
E-FJ	154	12.2%	I-FP	112	8.8%	Dt. F	266	21.0%
ES-P	133	10.5%	IS-J	344	27.2%	Dt. S	477	37.6%
EN-P	139	11.0%	IN-J	77	6.1%	Dt. N	216	17.0%

*Allen L. Hammer and Wayne D. Mitchell,
The Distribution of MBTI Types in the
US by Gender and Ethnic Group.*

**Table 6. Type Distribution of
CPP Adult Male Norms.**

N = 599 + = 1% of *N*

The Sixteen Complete Types				Dichotomous Preferences	
ISTJ <i>n</i> = 116 (19.4%) +++++ +++++ +++++ +++++	ISFJ <i>n</i> = 38 (6.3%) +++++ +	INFJ <i>n</i> = 12 (2.0%) ++	INTJ <i>n</i> = 29 (4.8%) +++++	E <i>n</i> = 272 (45.4%) I <i>n</i> = 327 (54.6%)	
ISTP <i>n</i> = 52 (8.7%) +++++ +++++	ISFP <i>n</i> = 14 (2.3%) ++	INFP <i>n</i> = 27 (4.5%) +++++	INTP <i>n</i> = 39 (6.5%) +++++ ++	S <i>n</i> = 386 (64.4%) N <i>n</i> = 213 (35.6%)	
ESTP <i>n</i> = 37 (6.2%) +++++ +	ESFP <i>n</i> = 24 (4.0%) ++++	ENFP <i>n</i> = 36 (6.0%) +++++ +	ENTP <i>n</i> = 40 (6.7%) +++++ ++	T <i>n</i> = 411 (68.6%) F <i>n</i> = 188 (31.4%)	
ESTJ <i>n</i> = 77 (12.9%) +++++ +++++ +++	ESFJ <i>n</i> = 28 (4.7%) +++++	ENFJ <i>n</i> = 9 (1.5%) ++	ENTJ <i>n</i> = 21 (3.5%) ++++	J <i>n</i> = 330 (55.1%) P <i>n</i> = 269 (44.9%)	
				Pairs and Temperaments	
				IJ <i>n</i> = 195 (32.6%) IP <i>n</i> = 132 (22.0%) EP <i>n</i> = 137 (22.9%) EJ <i>n</i> = 135 (22.5%)	
				ST <i>n</i> = 282 (47.1%) SF <i>n</i> = 104 (17.4%) NF <i>n</i> = 84 (14.0%) NT <i>n</i> = 129 (21.5%)	
				SJ <i>n</i> = 259 (43.2%) SP <i>n</i> = 127 (21.2%) NP <i>n</i> = 142 (23.7%) NJ <i>n</i> = 71 (11.9%)	
				TJ <i>n</i> = 243 (40.6%) TP <i>n</i> = 168 (28.0%) FP <i>n</i> = 101 (16.9%) FJ <i>n</i> = 87 (14.5%)	
				IN <i>n</i> = 107 (17.9%) EN <i>n</i> = 106 (17.7%) IS <i>n</i> = 220 (36.7%) ES <i>n</i> = 166 (27.7%)	
				ET <i>n</i> = 175 (29.2%) EF <i>n</i> = 97 (16.2%) IF <i>n</i> = 91 (15.2%) IT <i>n</i> = 236 (39.4%)	

Jungian Types (E)		Jungian Types (I)		Dominant Types				
<i>n</i>	%	<i>n</i>	%	<i>n</i>	%			
E-TJ	98	16.4%	I-TP	91	15.2%	Dt. T	189	31.6%
E-FJ	37	6.2%	I-FP	41	6.8%	Dt. F	78	13.0%
ES-P	61	10.2%	IS-J	154	25.7%	Dt. S	215	35.9%
EN-P	76	12.7%	IN-J	41	6.8%	Dt. N	117	19.5%

*Allen L. Hammer and Wayne D. Mitchell,
The Distribution of MBTI Types in the
US by Gender and Ethnic Group.*

Table 7. Type Distributions of Total CPP Adult Female Norms.

N = 668 + = 1% of *N*

The Sixteen Complete Types				Dichotomous Preferences		
ISTJ <i>n</i> = 82 (12.3%) +++++ +++++ ++	ISFJ <i>n</i> = 108 (16.2%) +++++ +++++ +++++ +	INFJ <i>n</i> = 21 (3.1%) +++	INTJ <i>n</i> = 15 (2.2%) ++	E <i>n</i> = 315 (47.2%) I <i>n</i> = 353 (52.8%)		
ISTP <i>n</i> = 29 (4.3%) ++++	ISFP <i>n</i> = 43 (6.4%) +++++ +	INFP <i>n</i> = 28 (4.2%) ++++	INTP <i>n</i> = 27 (4.0%) ++++	S <i>n</i> = 477 (71.4%) N <i>n</i> = 191 (28.6%)		
ESTP <i>n</i> = 24 (3.6%) ++++	ESFP <i>n</i> = 48 (7.2%) +++++ ++	ENFP <i>n</i> = 44 (6.6%) +++++	ENTP <i>n</i> = 19 (2.8%) +++	T <i>n</i> = 259 (38.8%) F <i>n</i> = 409 (61.2%)		
ESTJ <i>n</i> = 49 (7.3%) +++++ ++	ESFJ <i>n</i> = 94 (14.1%) +++++ +++++ ++++	ENFJ <i>n</i> = 23 (3.4%) +++	ENTJ <i>n</i> = 14 (2.1%) ++	J <i>n</i> = 406 (60.8%) P <i>n</i> = 262 (39.2%)		
				Pairs and Temperaments		
				IJ <i>n</i> = 226 (33.8%) IP <i>n</i> = 127 (19.0%) EP <i>n</i> = 135 (20.2%) EJ <i>n</i> = 180 (26.9%)		
				ST <i>n</i> = 184 (27.5%) SF <i>n</i> = 293 (43.9%) NF <i>n</i> = 116 (17.4%) NT <i>n</i> = 75 (11.2%)		
				SJ <i>n</i> = 333 (49.9%) SP <i>n</i> = 144 (21.6%) NP <i>n</i> = 118 (17.7%) NJ <i>n</i> = 73 (10.9%)		
				TJ <i>n</i> = 160 (24.0%) TP <i>n</i> = 99 (14.8%) FP <i>n</i> = 163 (24.4%) FJ <i>n</i> = 246 (36.8%)		
				IN <i>n</i> = 91 (13.6%) EN <i>n</i> = 100 (15.0%) IS <i>n</i> = 262 (39.2%) ES <i>n</i> = 215 (32.2%)		
				ET <i>n</i> = 106 (15.9%) EF <i>n</i> = 209 (31.3%) IF <i>n</i> = 200 (29.9%) IT <i>n</i> = 153 (22.9%)		
Jungian Types (E)		Jungian Types (I)		Dominant Types		.
<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	.
E-TJ 63	9.4%	I-TP 56	8.4%	Dt. T 119	17.8%	.
E-FJ 117	17.5%	I-FP 71	10.6%	Dt. F 188	28.1%	.
ES-P 72	10.8%	IS-J 190	28.4%	Dt. S 262	39.2%	.
EN-P 63	9.4%	IN-J 36	5.4%	Dt. N 99	14.8%	.

*Allen L. Hammer and Wayne D. Mitchell,
The Distribution of MBTI Types in the
US by Gender and Ethnic Group.*

**Table 8. Type Distribution of
CPP Adult White Norms.**

N = 1,022 + = 1% of *N*

The Sixteen Complete Types				Dichotomous Preferences	
ISTJ <i>n</i> = 150 (14.7%) +++++	ISFJ <i>n</i> = 123 (12.0%) +++++	INFJ <i>n</i> = 30 (2.9%) +++	INTJ <i>n</i> = 36 (3.5%) ++++	E <i>n</i> = 465 (45.5%)	I <i>n</i> = 557 (54.5%)
ISTP <i>n</i> = 66 (6.5%) +++++	ISFP <i>n</i> = 44 (4.3%) ++++	INFP <i>n</i> = 51 (5.0%) +++++	INTP <i>n</i> = 57 (5.6%) +++++	S <i>n</i> = 676 (66.1%)	N <i>n</i> = 346 (33.9%)
ESTP <i>n</i> = 41 (4.0%) ++++	ESFP <i>n</i> = 55 (5.4%) +++++	ENFP <i>n</i> = 69 (6.8%) +++++	ENTP <i>n</i> = 48 (4.7%) +++++	T <i>n</i> = 516 (50.5%)	F <i>n</i> = 506 (49.5%)
ESTJ <i>n</i> = 94 (9.2%) +++++	ESFJ <i>n</i> = 103 (10.1%) +++++	ENFJ <i>n</i> = 31 (3.0%) +++	ENTJ <i>n</i> = 24 (2.3%) ++	J <i>n</i> = 591 (57.8%)	P <i>n</i> = 431 (42.2%)
				Pairs and Temperaments	
				IJ <i>n</i> = 339 (33.2%)	IP <i>n</i> = 218 (21.3%)
				EP <i>n</i> = 213 (20.8%)	EJ <i>n</i> = 252 (24.7%)
				ST <i>n</i> = 351 (34.3%)	SF <i>n</i> = 325 (31.8%)
				NF <i>n</i> = 181 (17.7%)	NT <i>n</i> = 165 (16.1%)
				SJ <i>n</i> = 470 (46.0%)	SP <i>n</i> = 206 (20.2%)
				NP <i>n</i> = 225 (22.0%)	NJ <i>n</i> = 121 (11.8%)
				TJ <i>n</i> = 304 (29.7%)	TP <i>n</i> = 212 (20.7%)
				FP <i>n</i> = 219 (21.4%)	FJ <i>n</i> = 287 (28.1%)
				IN <i>n</i> = 174 (17.0%)	EN <i>n</i> = 172 (16.8%)
				IS <i>n</i> = 383 (37.5%)	ES <i>n</i> = 293 (28.7%)
				ET <i>n</i> = 207 (20.3%)	EF <i>n</i> = 258 (25.2%)
				IF <i>n</i> = 248 (24.3%)	IT <i>n</i> = 309 (30.2%)

Jungian Types (E)		Jungian Types (I)		Dominant Types				
<i>n</i>	%	<i>n</i>	%	<i>n</i>	%			
E-TJ	118	11.5%	I-TP	123	12.0%	Dt. T	241	23.6%
E-FJ	134	13.1%	I-FP	95	9.3%	Dt. F	229	22.4%
ES-P	96	9.4%	IS-J	273	26.7%	Dt. S	369	36.1%
EN-P	117	11.4%	IN-J	66	6.5%	Dt. N	183	17.9%

*Allen L. Hammer and Wayne D. Mitchell,
The Distribution of MBTI Types in the
US by Gender and Ethnic Group.*

**Table 9. Type Distribution of CPP
Adult African American Norms.**
N = 177 + = 1% of N

The Sixteen Complete Types				Dichotomous Preferences	
ISTJ n = 39 (22.0%) +++++ +++++ +++++ +++++ +++++	ISFJ n = 13 (7.3%) +++++ ++	INFJ n = 1 (0.6%) +	INTJ n = 7 (4.0%) ++++	E n = 89 (50.3%) I n = 88 (49.7%)	
ISTP n = 15 (8.5%) +++++ +++++	ISFP n = 7 (4.0%) +++++	INFP n = 0 (0.0%)	INTP n = 6 (3.4%) +++	S n = 143 (80.8%) N n = 34 (19.2%)	
ESTP n = 18 (10.2%) +++++ +++++	ESFP n = 13 (7.3%) +++++ ++	ENFP n = 6 (3.4%) +++	ENTP n = 8 (4.5%) +++++	T n = 124 (70.1%) F n = 53 (29.9%)	
ESTJ n = 25 (14.1%) +++++ +++++ +++++	ESFJ n = 13 (7.3%) +++++ ++	ENFJ n = 0 (0.0%)	ENTJ n = 6 (3.4%) +++	J n = 104 (58.8%) P n = 73 (41.2%)	
				Pairs and Temperaments	
				IJ n = 60 (33.9%) IP n = 28 (15.8%) EP n = 45 (25.4%) EJ n = 44 (24.9%)	
				ST n = 97 (54.8%) SF n = 46 (26.0%) NF n = 7 (4.0%) NT n = 27 (15.3%)	
				SJ n = 90 (50.8%) SP n = 53 (29.9%) NP n = 20 (11.3%) NJ n = 14 (7.9%)	
				TJ n = 77 (43.5%) TP n = 47 (26.6%) FP n = 26 (14.7%) FJ n = 27 (15.3%)	
				IN n = 14 (7.9%) EN n = 20 (11.3%) IS n = 74 (41.8%) ES n = 69 (39.0%)	
				ET n = 57 (32.2%) EF n = 32 (18.1%) IF n = 21 (11.9%) IT n = 67 (37.9%)	

Jungian Types (E)		Jungian Types (I)		Dominant Types		.			
n	%	n	%	n	%	.			
E-TJ	31	17.5%	I-TP	21	11.9%	Dt. T	52	29.4%	.
E-FJ	13	7.3%	I-FP	7	4.0%	Dt. F	20	11.3%	.
ES-P	31	17.5%	IS-J	52	29.4%	Dt. S	83	46.9%	.
EN-P	14	7.9%	IN-J	8	4.5%	Dt. N	22	12.4%	.

*Allen L. Hammer and Wayne D. Mitchell,
The Distribution of MBTI Types in the
US by Gender and Ethnic Group.*

**Table 10. Type Distribution of
CPP Adult Hispanic Norms.**
N = 54 += 1% of N

The Sixteen Complete Types				Dichotomous Preferences		
ISTJ n = 8 (14.8%) +++++	ISFJ n = 7 (13.0%) +++++	INFJ n = 2 (3.7%) ++++	INTJ n = 1 (1.9%) ++	E n = 29 (53.7%)	I n = 25 (46.3%)	
				S n = 38 (70.4%)	N n = 16 (29.6%)	
				T n = 25 (46.3%)	F n = 29 (53.7%)	
				J n = 35 (64.8%)	P n = 19 (35.2%)	
				Pairs and Temperaments		
ISTP n = 0 (0.0%)	ISFP n = 4 (7.4%) +++++	INFP n = 1 (1.9%) ++	INTP n = 2 (3.7%) ++++	IJ n = 18 (33.3%)	IP n = 7 (13.0%)	
				EP n = 12 (22.2%)	EJ n = 17 (31.5%)	
				ST n = 17 (31.5%)	SF n = 21 (38.9%)	
				NF n = 8 (14.8%)	NT n = 8 (14.8%)	
ESTP n = 3 (5.6%) +++++	ESFP n = 3 (5.6%) +++++	ENFP n = 4 (7.4%) +++++	ENTP n = 2 (3.7%) ++++	SJ n = 28 (51.9%)	SP n = 10 (18.5%)	
				NP n = 9 (16.7%)	NJ n = 7 (13.0%)	
				TJ n = 18 (33.3%)	TP n = 7 (13.0%)	
				FP n = 12 (22.2%)	FJ n = 17 (31.5%)	
ESTJ n = 6 (11.1%) +++++	ESFJ n = 7 (13.0%) +++++	ENFJ n = 1 (1.9%) ++	ENTJ n = 3 (5.6%) +++++	IN n = 6 (11.1%)	EN n = 10 (18.5%)	
				IS n = 19 (35.2%)	ES n = 19 (35.2%)	
				ET n = 14 (25.9%)	EF n = 15 (27.8%)	
				IF n = 14 (25.9%)	IT n = 11 (20.4%)	
<hr/>						
Jungian Types (E)	Jungian Types (I)	Dominant Types				
n %	n %	n %				
E-TJ 9 16.7%	I-TP 2 3.7%	Dt. T 11 20.4%				
E-FJ 8 14.8%	I-FP 5 9.3%	Dt. F 13 24.1%				
ES-P 6 11.1%	IS-J 15 27.8%	Dt. S 21 38.9%				
EN-P 6 11.1%	IN-J 3 5.6%	Dt. N 9 16.7%				

*Allen L. Hammer and Wayne D. Mitchell,
The Distribution of MBTI Types in the
US by Gender and Ethnic Group.*

**Table 11. Type Distribution of CPP Norms for
Children Less Than 18 Years of Age.**
N = 293 + = 1% of N

The Sixteen Complete Types				Dichotomous Preferences	
ISTJ n = 31 (10.6%) +++++ +++++ +	ISFJ n = 14 (4.8%) +++++	INFJ n = 6 (2.0%) ++	INTJ n = 11 (3.8%) ++++	E n = 170 (58.0%)	I n = 123 (42.0%)
				S n = 164 (56.0%)	N n = 129 (44.0%)
				T n = 152 (51.9%)	F n = 141 (48.1%)
				J n = 123 (42.0%)	P n = 170 (58.0%)
				Pairs and Temperaments	
ISTP n = 15 (5.1%) +++++	ISFP n = 14 (4.8%) +++++	INFP n = 16 (5.5%) +++++ +	INTP n = 16 (5.5%) +++++	IJ n = 62 (21.2%)	IP n = 61 (20.8%)
				EP n = 109 (37.2%)	EJ n = 61 (20.8%)
				ST n = 96 (32.8%)	SF n = 68 (23.2%)
				NF n = 73 (24.9%)	NT n = 56 (19.1%)
				SJ n = 87 (29.7%)	SP n = 77 (26.3%)
ESTP n = 27 (9.2%) +++++ ++++	ESFP n = 21 (7.2%) +++++ ++	ENFP n = 38 (13.0%) +++++ +++++ +++	ENTP n = 23 (7.8%) +++++ +++	NP n = 93 (31.7%)	NJ n = 36 (12.3%)
				TJ n = 71 (24.2%)	TP n = 81 (27.6%)
				FP n = 89 (30.4%)	FJ n = 52 (17.7%)
				IN n = 49 (16.7%)	EN n = 80 (27.3%)
ESTJ n = 23 (7.8%) +++++ +++	ESFJ n = 19 (6.5%) +++++ ++	ENFJ n = 13 (4.4%) ++++	ENTJ n = 6 (2.0%) ++	IS n = 74 (25.3%)	ES n = 90 (30.7%)
				ET n = 79 (27.0%)	EF n = 91 (31.1%)
				IF n = 50 (17.1%)	IT n = 73 (24.9%)

Jungian Types (E)		Jungian Types (I)		Dominant Types				
n	%	n	%	n	%			
E-TJ	29	9.9%	I-TP	31	10.6%	Dt. T	60	20.5%
E-FJ	32	10.9%	I-FP	30	10.2%	Dt. F	62	21.2%
ES-P	48	16.4%	IS-J	45	15.4%	Dt. S	93	31.7%
EN-P	61	20.8%	IN-J	17	5.8%	Dt. N	78	26.6%

*Allen L. Hammer and Wayne D. Mitchell,
The Distribution of MBTI Types in the
US by Gender and Ethnic Group.*

sample are caused by the differences between the White and African American samples on the S-N and T-F scales. The African American sample has more Ss (81%) and more Ts (70%) than the total sample, which is 70% S and 53% T. As in the total sample, the modal type is ISTJ (22%). In contrast, the Hispanic sample (with 50% each of males and females) shows a majority of Fs (54%) and slightly more Es (54%) than Is (46%). Although the modal type is also ISTJ (15%), ISFJ and ESFJ are a close second at 13% each. Even though the percentages of these ethnic groups match those found in the general US population, as indexed by the Census, the results should be interpreted with caution, because the actual numbers are relatively small.

The distribution of types and preferences for people under 18 years old is shown in Table 11. This sample is comprised of 57% females and 43% males, with a mean age of 15.2 years ($SD = 1.2$). In contrast to the adult sample, this group has more Es (58%), more Ps (58%), and a closer balance between S (56%) and N (44%). The three most frequent types are ENFP (13%), ISTJ (11%), and ESTP (9%). The least frequent types are INFJ (2%) and ENTJ (2%). The frequencies in this sample show some similarity to those reported by Meisgeier and Murphy (1987) in their sample of children in grades 2 through 12 who were administered the MMTIC: more Es than Is, more Ps than Js, and ENFP the modal type. However, the CPP sample shows slightly more Ts (52%) among the children, whereas the MMTIC sample is almost 80% F.

Discussion

The CPP adult norm sample, like the sample from SRI but *unlike* the Myers and CAPT samples, has a greater proportion of Is (54%) than Es (46%). Also like the SRI sample, the modal type in the CPP norms is ISTJ, followed by ISFJ, ESTJ, and ESFJ, in that order. Although there are similarities between the CPP norms and the SRI norms, the most noticeable difference is in the estimated proportion of ISTJ males; the SRI sample shows 31%, whereas in the CPP norms the proportion is about 19%. Despite this difference, the two samples that come closest to being national representative samples, the SRI sample and the CPP norms, strongly suggest that the presumed 3:1 ratio of E to I is incorrect. A better approximation is that the number of Es and Is in the population is about equal, or that there are slightly more Is than Es. Although such conventions are difficult to break, the effort seems warranted, as there is no support in any sample, including Myers' high school sample, for a 3:1 ratio of Es to Is.

Researchers who use more precise estimates, such as the Myers high school sample or the CAPT

data bank, may also come to different conclusions if more representative base populations are used. For example, Walck (1992), in a review of the research on type and management, compared a sample of 7,463 managers and administrators from the CAPT data bank with Myers' sample of 4,933 high school males. One of her conclusions was that Is and ISTJs were overrepresented among the managerial group, with selection ratio indices of 1.14 and 1.71, respectively. When this same sample of managers and administrators is compared to the CPP adult male norms, I and ISTJ are *under*represented, with selection ratio indices of .79 and .77, respectively.

Using the CPP adult norms, which show a more equal distribution of Es and Is, may also help to explain the relatively small number of SPs observed in many recent type tables. The low proportion of people with this combination of preferences in type tables has often been explained by speculating that these types, particularly the ESPs, are not attracted to situations where taking the MBTI is likely to occur. Although this may be a partial explanation for the observed frequencies of SPs in some samples, such as certain college student groups, it may also be that SPs are just not as prevalent as is typically assumed. Using the traditional three to one ratio of Es to Is and of Ss to Ns, one would expect the SPs to comprise about 38% of any reasonably representative sample. However, in the CPP adult norms, the SPs represent only about 21% of the total.

Conclusions based on the CPP norms should take into account the limitations of the sampling procedures. It is not a random sample from the entire US population, which is extremely rare in psychology. Two limitations of the sampling procedure may have affected the results. First, the kind of people available for the sample may be a function of the social networks of the interviewers. The second limitation is that at some point in the sampling effort, administration of the MBTI was left to the discretion of the individual interviewers. Possibly as a result of these sampling methods, the sample is somewhat more educated than the general US population. This may account for the fact that there are more Is than Es in the sample, as the former tend to be overrepresented in samples with more education. However, it is unlikely that if these procedures had been different, the percentages would have been altered substantially. Another limitation is that the geographic representation of people who took the MBTI, and therefore of the final sample presented in this paper, is unknown.

Despite these limitations, the CPP adult norms provide a close match to what the latest US Census shows to be the proportion of men and women from the largest ethnic groups in the United States. The CPP norms also reflect a more recent sampling effort

than the SRI sample, which is the other sample that comes closest to being a national random sample. Therefore, the CPP norms are the *closest approximation* currently available to a national representative sample of MBTI types. Thus, it is suggested that until a better sample becomes available, the CPP norms reported here be used when estimates are needed of the distribution of MBTI types or preferences in the general population.

References

- Kaufman, A., & Kaufman, N. (1992). *Manual for the Kaufman Adolescent and Adult Intelligence Test*. Circle Pines, MN: American Guidance Service.
- Macdaid, G. P., McCaulley, M. H., & Kainz, R. I. (1986). *Myers-Briggs Type Indicator Atlas of Type Tables*. Gainesville, FL: Center for Applications of Psychological Type.
- McCaulley, M. H., Macdaid, G. P., & Kainz, R. I. (1985). Estimated frequencies of the MBTI types. *Journal of Psychological Type*, 9, 3-9.
- Meisgeier, C., & Murphy, E. (1987). *Murphy-*

Meisgeier Type Indicator for Children Manual. Palo Alto, CA: Consulting Psychologists Press, Inc.

Myers, I. B., & McCaulley, M. H. (1985). *Manual: A guide to the development and use of the Myers-Briggs Type Indicator*. Palo Alto, CA: Consulting Psychologists Press, Inc.

US Census Bureau. (1990). *Summary measures of educational attainment of the population ages 25 & over* (Series P-20, Report No. 476, Table A). Washington: Author.

Walck, C. L. (1992). Psychological type and management research: A review. *Journal of Psychological Type*, 24, 13-23.

Contact

Dr. Allen L. Hammer
8616 Grand Summit Road
Richmond, VA 23235

(804) 272-9404

* * *