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Honors College Type: A Detailed MBTI Analysis

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Her vision is to create a society of lifelong learners, armored with the capacity to embrace diversity of thought in order to improve the world for future generations.

Keywords

: type inventory, extravert, introvert, sensing, intuitive, thinking, feeling, judging, perceiving



HONORS COLLEGE TYPE: A DETAILED MBTI ANALYSIS

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Abstract

Individuals in society today are entrenched in stress, from competitive environments like school or work to social anxieties, including one's struggle to acclimate and survive within a given subset of individuals. As a result, life can have challenges. Nowhere is this more apparent than among the schools' high schools and college campuses where students, overwhelmed by a culture where they fail to thrive, take drastic, irreparable, and lethal action. While no established student profile is likely to engage in extreme violence like school shootings, reliable data is detailing some ominous motives (The school shooter, 2002). Paired with this information and an expanded understanding of individual personality profiles, this study seeks to underscore the importance of providing mental wellness support for students across university campuses, aligned with the students' personality preferences to understand better how students envision and mitigate stress.

One of the most familiar and reliable tools to determine aspects of one's personality and how one is likely to interpret and respond to stimuli is the Myers Briggs Type Inventory, commonly referred to as MBTI (Richmond, 2005). Type inventory allows participants to answer a series of questions to determine their four-letter type, one of 16 possible options, to demonstrate their personality preferences. This tool was employed in Honors College classes with students from a research university in the Southeastern United States in a Freshman Orientation setting to help the students better understand how to recognize and constructively respond to stress as they began their academic journey in higher education. The outcomes were remarkable as they helped reinforce expectations in select facets but provided unexpected findings in other areas.

Introduction

One of the most remarkable adaptations many students make from high school to college is acclimating to university life and becoming successful. While students with exceptional academic promise, as evidenced by their standardized assessment scores and cumulative Grade Point Average, are equipped with the cognitive ability to complete the necessary work, other stressors impact honors students. Many struggles with socioemotional challenges like perfection as honors students may struggle with the desire to perform perfectly in all areas, maintaining the ideal 4.0-grade point average. Known as honor student stress (Sapadin, 2018), these students experience increased anxiety and physical distress when faced with the possibility of less than perfect academic outcomes.

New York University researchers found that "nearly half (49%) of all students reported feelings of stress daily and 31% reported feeling somewhat stressed...with a substantial minority, 26 percent of participants, reported symptoms of depression at a clinically significant level" (NYU, 2015, para.7). High-performing students new to college life may find that what was considered elite skills and knowledge in high schools was based on Social Comparison Theory than actual exceptional ability compared to their similarly performing peers in the

Honors College (Psychology Today, 2020). Although they likely led the academic charge in their previous settings, the contest changes when they cross the threshold from a high school environment, especially a public high school in a state entrenched in poverty, to a large research university.

Furthermore, these new stresses, combined with the foray into independent living, separate from their families, collectively generate composite stresses the students have never dealt. Independent living while coexisting with a new roommate can offer some unexpected social and emotional challenges. Instead, it is a conflict over space, time, or noise levels, and challenges will likely arise. While individuals appear resilient to adverse impacts, others can seemingly find themselves entirely distraught when facing unfamiliar adversity (Ahmed, 2015). While one's ability to return to a normal state after experiencing a negative impact is deemed resiliency (Zimmerman, 1994), the literature evidences several specific phenomena which correlate with one's ability to be resilient. This series includes achievement focus in and out of the school setting, the ability to separate from home and acclimate with an alternate setting selectively and establishing and maintaining an internal locus of control (Barnard, 1994).

Additionally, since 85% of active workforce employees attest to being unhappy in their professions (Burrows, 2017), it is paramount to help students better identify career fields where they will find contentment in their formative years. Furthermore, Gallup describes this discontented workforce as "emotionally disconnected from their workplace" (para 3). This narrative aligns with a need for a better understanding of employee personality type to find a career that offers the employee a channel for their talents and expression to maximize worker contentment and productivity. By better understanding type, employees can focus on preparing themselves for a career that fits their interests and personality type, providing the opportunity for improved worker morale, creativity, and dedication to their chosen field. Students will find the maximum benefit from higher education only if they have evidence of both passion and purpose in selecting their field of study (Morrison, 2015). Therefore, it is paramount that students find the best-fit areas early in their selections, especially when one recognizes that nearly 75% of all college students change their majors at least once (Freedman, 2013).

With the expanse of data validating the widespread discontent of workers, paired with the expense and time commitment required for training for a career field, and the stresses associated with STEM careers, it is paramount that students identify aligned interest areas early in their academic career. Given the latest data on Myers-Briggs Type Indicator data which attests that the assessment, commonly called the Type Indicator or MBTI, has proven reliability with updated statistics, paired with its 80-year performance and experience in 88 of the Fortune 100 companies (The Myers-Briggs Company, 2019), it seems a practical tool to help students identify and analyze their preferences.

This tool dissects individual preferences based on the subject's responses to a series of multiple-choice questions and can be found at <https://www.16personalities.com> (NERIS Analytics Limited, 2019). The composite of the answers forms the individual's personality type preferences. There are 16 possible preference outcomes. They are detailed based on four dichotomous comparisons. Individuals will prefer one of each of the four, as follows:

Extravert or Introvert	E or I
Intuitive or Sensor	N or S
Feeler or Thinker	F or T
Judger or Perceiver	J or P

Therefore, the composite types are represented by Table 1, the MBTI organization tool commonly used by Myers-Briggs practitioners (Richmond, 2005).

Table 1

MBTI Types

ISTJ	ISFJ	INFJ	INTJ
ISTP	ISFP	INFP	INTP
ESTP	ESFP	ENFP	ENTP
ESTJ	ESFJ	ENFJ	ENTJ

These types represent the 16 different personalities described by Isabel Briggs Myers in the following manner (Myers, 1993, p. 13).

- ISTJ types are described as quiet, serious, and dependable. They are also finding comfort in maintaining order in their lives.
- ISFJ types are quiet, friendly, and responsible. They find comfort in orderly and harmonious environments.
- INFJ types seek meaning and connection, using ideas, relationships, and material possessions. They are organized and decisive in setting their vision.
- INTJ types have original thoughts and passion for achieving their goals. However, they are also skeptical and independent.
- ISTP types are tolerant and flexible. They are quiet observers who act quickly to find solutions. They are interested in cause and effect and value efficiency.
- ISFP types are quiet, friendly, sensitive, and kind. They dislike disagreements and avoid forcing their values on others.
- INFP types are idealistic and loyal. They are adaptable, flexible, and accepting unless a value is threatened.
- INTP types seek to develop logical explanations for everything. Therefore, they can focus on solving in-depth problems. Skeptical, they are always analytical.
- ESTP types are flexible and tolerant but focus on immediate results. They enjoy material comforts and learn best by doing.
- ESFP types are outgoing, friendly, and accepting. They learn best by trying a new skill with others.
- ENFP types are warm, enthusiastic, and imaginative. They are spontaneous and flexible and improvise easily.
- ENTP types are quick and ingenious. However, they are bored by routine, rarely doing the same thing in the same way.
- ESTJ types are practical and realistic. They have clear and logical standards, which they follow systematically.
- ESFJ types are warmhearted, conscientious, and cooperative. Try to provide what others need and want to be appreciated.
- ENFJ types are warm, empathetic, and responsible. In addition, they are sociable, facilitate groups, and provide inspirational leadership.
- ENTJ types are frank, decisive, and readily assume leadership. In addition, they enjoy goal setting and might be forceful in presenting their ideas.

Additionally, existing research guides in helping students understand how their preferences are likely to balance more comfortably with select majors while generating stress in others. Given that most of the Honors College students at Mississippi State University (MSU), a major research university located in the Southeastern United States, foremost in Science Technology Engineering or Math (STEM) disciplines, students concentrating in those areas of study will dominate this study. For those who elected to share their preferences, most were aligned with a STEM field of study based on the densities of the Honors College composite of majors. If each of the students within the group were ideally aligned with a STEM field, one would expect atypical type data densities compared to the general population.

Based on a study conducted with students at the University of Texas at San Antonio, the most prevalent student personality type within the general population was ENFP (Hamm, 2018), with 18% of college respondents reporting to prefer this type. In addition, students with STEM-focused career paths, specifically in mechanical, electrical, and computer engineering, preferred INFP, while those with a biomedical engineering focus leaned toward ESTJ. This is interesting as it may prove relevant to the work conducted within this study since the Texas comparison evidenced opposite tendencies within what academia has grouped as seemingly similar career paths (Hamm, 2017).

With insufficient or abundant data on college students majoring in select STEM fields, the researcher chose to analyze the type preferences typically exhibited by those working as practitioners within preferred STEM disciplines. One area of interest to a group of students includes the biological sciences. Biological scientists (StudentScholarships, n.d) are often curious researchers who seek to comprehend living organisms and their dynamic interactions. Spending much time inside laboratories focused on research will often elect isolation to concentrate and coordinate their thoughts. As such, biological scientists often tend to exhibit introversion functions (Online Personality Tests, 2019).

This group is more likely to prefer intuitive than sensing tendencies as they are usually more interested in theories, patterns, and explanations. They are often open-minded in their views, imagining endless possibilities for research. Essentially, they do not simply accept facts and data, looking beyond something to imagine what it can become (Sato, 2016). Considering scientists are considered some of the great thinkers of modern society, it is no surprise that they often select the thinking function rather than the feeling function. Since science is focused on discovery and innovation, it must be impartial. As a result, biological scientists are typically driven by thought over emotion (Online Personality Tests, 2019). Research often takes extensive planning, so biological scientists must anticipate every day's workload. The difficulty with research is that it usually does not go as planned. Scientists will often prepare for these scenarios by creating multiple backup plans. Therefore, biological scientists will often express judging over the perceiving function. Overall, most biological scientists are anticipated to prefer the INTJ personality type (Sato, 2016).

While limited research is available, researchers must rely on select studies like that from Stephanie Gill Fussell from Embry-Riddle Aeronautical University, who found that STEM students majoring in Aviation, for example, were more likely to have preferences for Perceiving versus Judging, likely allowing them to have a full range of flexibility in stressful situations (Fussell, 2017). She also references studies that aligned flight instructors, engineers, and commercial helicopter pilots, best described as ESTP, with a notable disparity in types based on

profession. For example, officers who specialized in computers and highly technical work prefer ISTJ traits.

While the most frequently selected career aspiration for the Honors College students was engineering, the Fussell study involved participants focused on aviation. The students in the research sample for this data are aspiring aeronautical, mechanical, industrial, and computer engineers. Based on Personality Max (2020), engineers are generally energized by time alone to contemplate, realizing a dominant preference for introversion. They are also focused inventors, realizing a choice for intuitive versus sensing facets. As one might imagine, the engineering profile is also predicated upon a thinking preference, aligning with facts over narrative. However, they also evidence spontaneous imagination preferences, aligning with a clear choice for perceiving over judging functions. Therefore, engineers are frequently identified as preferring an INTP composite (personalitymax.com, 2020).

Collectively, there are 16 MBTI personality preferences. While any type could elect to pursue any career, analyzing one's natural preferences helps students matriculate to a major or field of study which is most likely able to align with how they would choose to interact with others, the type of protocols followed, the emphasis on thinking, and the space for individuality. This study offers insight into students' preference data to explore their classes, majors, and future career paths.

Method

Given the disparity between what MBTI sources identify as typically aligned with the separate facets within the STEM fields, this study will focus on comparing its data with what the average population densities offer. Texas study, which found a maximum density of ENFP preferences within the general college student populations from a large sample analyzed (Hamm, 2018), will also be compared to the data outcomes. Recognizing that college freshmen often alter their major, the Mississippi State University Honors College, also known as the Shackouls Honors College, created an Honors College Freshmen Orientation course are designed to help students better understand themselves to navigate the novel and complex more effectively waters of university environments. Furthermore, it is posited that as students better understand their preferences and stress, they can also effectively discover academic success paired with social-emotional contentment. The key to this endeavor was to align students with their preferences and compare those preferences to the ones typical for select majors or careers. It is from these classes that the sample data was retrieved.

This sample's type preferences for 50 Freshmen, Mississippi State University Honors College students participating in this Honors Freshman Orientation class were analyzed using the MBTI tool independently via www.16personalities.com to determine their initial responses. While this was not an entirely homogenous group, the students overwhelmingly represent the Southeastern United States, with only one of the 50 from outside the area but still within the continental states. Furthermore, 46 of the 50 students verbally identified their majors as within the STEM fields. Three of the 50 elected not to share their type within the class construct. Sharing one's type anonymously by marks on an erasable board was offered to provide evidence of the density or absence of a particular type within the class setting. There was no benefit or detriment to sharing one's type anonymously.

Data Collection

Organized as an Honors College presently educating nearly 2,000 undergraduate students who must apply and meet select criteria in addition to university admittance, the students from this research study were all MSU Honors College Freshmen. They participated in an orientation to college life course to help them better navigate the complexities of college life, independent of the academic challenges. Furthermore, the students were all, except one fashion design major, majoring in Science, Technology, Engineering, or Math fields, commonly referred to as STEM majors. Although not in a STEM field, this individual shared that she was uncertain of her current major and considered changing it to something else.

While this is not necessarily the entire construct for the Honors College at Mississippi State, the nature of the university's composition as a renowned engineering school and its offering of an exceptional veterinary medicine program typically attracts top students with STEM interests into its Honors College.

The 50 students individually and independently participated in the online version of the Myers-Briggs Type Inventory test, specifically www.16types.org, to discover their type preferences. They then, voluntarily, reported back with their preferences among the 16 personality types available via the profile options. Only 47 of the 50 students elected shared their personality types by placing a tick mark on a whiteboard with open spaces for each of the 16 personality types. The students' names or identifiers were not revealed. The professor merely took an electronic image of the cross-hatched whiteboard, revealing the relative densities of select types. Students in the second class repeated the exercise. The class composites were combined to allow for a more extensive data set from the Freshmen Honors College class of 2019.

Results

Outcomes collected represented the 47 participating students who elected to share their types. Given that only one student within the class composite of 50 students majored in anything other than STEM, it is reasonable to infer that most student types represented align with students who are beginning their academic careers in STEM majors. Table 2: MBTI Types and Density Percentages reveals what was discovered from this research.

Table 2

MBTI Types and Density Percentages of Sample Population

ISTJ	12.7	ISFJ	10.6	INFJ	14.8	INTJ	8.5
ISTP	8.5	ISFP	0.0	INFP	8.5	INTP	8.5
ESTP	0.0	ESFP	4.2	ENFP	0.0	ENTP	2.1
ESTJ	4.2	ESFJ	4.2	ENFJ	10.6	ENTJ	2.1

The data collected represents the percentages of each MBTI type, evidenced as a percentage of the whole. For example, one student within a population of 47 represents a relative sample population density of two and one-tenth percent of the whole. As Table 2 indicates, the most frequently expressed type preferences were INFJ, at 14.8%. This dominant preference density was followed by types ISTJ, representing 12.7% of the sampled students. ENFJ and ISFJ each represented 10.6% of the sampled student population. Four types were represented with equal frequencies of 8.5% each, specifically ISTP, INFP, INTJ, and INTP. Three types were representing 4.2% of the sample population. They were ESTJ, ESFP and ESFJ. There were also two types, each representing 2.1% of the sample population, specifically ENTP and ENTJ. There

were no students who preferred three of the sixteen type preferences. None of the sample Honors College students who shared their type preferences evidenced ESTP, ISFP, or ENFP.

In contrast, when compared against the standard, traditional, heterogeneous population data for MBTI preferences using over 3,000 respondents, the following data was observed and detailed in Table 3 (Richmond, 2005).

Table 3

MBTI Types and Densities of Heterogenous Population Sample

ISTJ	11.6	ISFJ	13.8	INFJ	1.5	INTJ	2.1
ISTP	5.4	ISFP	8.8	INFP	4.4	INTP	3.3
ESTP	4.3	ESFP	8.5	ENFP	8.1	ENTP	3.2
ESTJ	8.7	ESFJ	12.3	ENFJ	2.5	ENTJ	1.8

It is interesting to notice the variance between the expected population densities of individual types (Richmond, 2005) and that of the observed type densities. While the population sample was smaller than the thousands of respondents used for the MBTI standards, the sample size of 47 respondents was too large to offer individual narratives of the participants. Therefore, the data were analyzed using the Chi-square test for independence, comparing the two variables. A minimal outcome indicated the data fit what was expected, whereas a tremendous result signified a lack of relationship between the two (Statistics How To, 2019). The formula used for this analysis was the chi-square formula,

$$\chi^2_c = \sum \frac{(O_i - E_i)^2}{E_i}$$

The subscript "c" denoted the degrees of freedom with "O" as the observed values from the sample population and "E" as the expected values based on population norms. The summative symbol evidenced the need to calculate each of the sixteen types in the analysis. The calculations were performed 16 times, one for each of the MBTI personality composite types. Table 4, *Chi-square formula outcomes*, reveals the data using the formula detailed above. Furthermore, to effectively calculate the chi-square for each component, the degrees of freedom were required to utilize a chi-square table (Statistics How To, 2019). Given the 16 MBTI types represented, the degrees of freedom used: categories minus one equaled 16 less or 15 degrees of freedom. This revealed that the calculations must have shown a necessary value of 4.600 or less for the data points to be considered appropriate to reject the null hypothesis with a 95% degree of certainty.

It is further noteworthy that the 18% revealed from the Texas study (Hamm, 2018) represent the largest composite of a university database for ENFP. Thus, ENFP varies dramatically from the heterogeneous population, where 8.1% would be anticipated, and the sample population, which evidenced only 6.5% of the individuals to prefer ENFP.

Table 4

Chi-square formula outcomes

Type	Observed	Expected	O-E	(O-E) ²	(O-E) ² /E
ISTJ	15.2	11.6	13.6	184.96	1.17
ISFJ	3.9	13.8	-9.9	98.01	7.10
INFJ	2.0	1.5	0.5	0.25	0.17
INTJ	5.8	2.1	3.7	13.69	6.52
ISTP	5.0	5.4	-0.4	0.16	0.03
ISFP	1.9	8.8	-6.9	47.61	5.41
INFP	3.3	4.4	-1.1	1.20	0.23
INTP	5.7	3.3	2.4	5.76	1.75
ESTP	5.6	4.3	1.3	1.69	0.39
ESFP	2.6	8.5	-5.9	34.82	4.10
ENFP	6.5	8.1	-1.6	2.56	8.32
ENTP	8.3	3.2	5.1	26.01	8.13
ESTJ	16.7	8.7	8.0	64.0	7.36
ESFJ	4.9	12.3	-7.4	54.76	4.45
ENFJ	3.7	2.5	1.2	1.44	0.50
ENTJ	8.9	1.8	7.1	79.21	28.01

Conclusion

The calculation outcomes revealed a wide-ranging disparity between the observed versus expected type densities. While nine of the types were within the expected range, allowing one to accept the null hypothesis, as those types did not vary substantially or statistically from the normal population, seven types were well outside the range for which one would accept the null hypothesis. Therefore, there was an apparent disparity between this sample population and the normal population for these six types, causing one to reject the null hypothesis, evidencing a significant difference between the densities of these six types and that of the normal population. The following nine types were within the calculated range of less than 4.600, the value, which, according to the chi-square table, would be within the expected values when using .05 degrees of freedom (Statistics How To, 2019). These were ISTJ, INFJ, ISTP, INFP, INTP, ESTP, ESFP, ESFJ, and ENFJ.

Conversely, the remaining seven types were outside the calculated range of less than 4.600 and more than the expected range expected to accept the null hypothesis. These values substantiate the six types identified: ISFJ, INTJ, ISFP, ENFP, ENTP, ESTJ, and ENTJ. In particular, ENTJ representation varied substantially and statistically from what one would anticipate in an average population. Collectively, these seven types allowed the researcher to reject the null hypothesis and conclude that these type densities indicate a unique type of population.

While not all type concentrations revealed dramatic variances, seven of the 16 types had sample population densities significantly outside the normal population range. Furthermore, ESFJ at 7.10, INTJ at 6.52, ISFP at 5.41, ENFP at 8.32, ENTP at 8.13, and ESTJ at 7.36 showed notable variance. Specifically, there were notably fewer sample population individuals who preferred ISFJ and ENFP than would have been expected. There were also significantly more

students who preferred INTJ, ESTJ, and ENTP. However, perhaps the most notable observation from this data was realized with the type preference of ENTJ, where the variance was seven times greater than what one would consider within the normal range.

The Thinking preference was dominant among those whose type densities were significantly outside of the range of what would be considered a normal population. All the types with increased densities preferred the Thinking facet. However, given the astounding preferences that these MSU Honors College freshmen showed for the composite type of ENTJ, it is reasonable to conclude that this type may be more prevalent among 2019 freshmen students whose academic aptitude and interests lead them to select to attend an honors college and focus on majors in the STEM field.

Additionally, the data indicates that the student sample data evidence a significantly different preference type from the highest concentration of 18% found within a traditional student population of ENFP as found in the Texas study (Hamm, 2018) compared to this MSU Honors College sample which revealed only 6.5% of the students identified with this type, a density lower than one would expect to find even within a typical heterogeneous sample. First, however, it is worth dissecting the types which offered dominant presences in both the present study and the Texas study. In the Texas study (Hamm, 2018), ENFP was the dominant type preference among all college students sampled. In this smaller sample analysis, which unpacked data for a select population of Honors College freshmen and Honors College Freshmen who were predominantly STEM majors, ENTJ was realized as the dominant type. While these evidence different complex type preferences, they do offer some commonalities. Both sets of data from the current research and the 2018 data revealed a preponderance of student densities toward Extraversion and Intuitive preferences (EN). While the Texas data evidenced a preference for composite student populations to connect these facets with Feeling and Perceiving (FP) preferences, unique and separate from this study's preferences for Thinking and Judging (TJ), it does not negate the commonalities discovered.

Results indicate that Extraversion and Intuitive (EN) preferences dominate traditional college students and select Mississippi State University Honors College student populations. However, unique to this population appears to be the preferences for Thinking and Judging (TJ) over Feeling and Perceiving (FP) compared to a traditional college student population. Perhaps the realization that the dominant facets unique to these MSU Honors College STEM majors are individuals who also prefer Thinking and Judging (TJ) may offer some insight into what interests and personality types separate those who do and do not elect to venture into the STEM majors.

Furthermore, the additional two types within the chi-square analysis, which were next in order of magnitude as examples of data values dramatically outside the range, were ENFP and ENTP types. This data offers two insights. First, it reinforces the preponderance of college students' preferences for Extraversion and Intuitive (EN) personality facets, regardless of their major aggregation. Second, it also positively correlates with the Texas study and identifies and reinforces ENFP as one of the types of personality preferences more frequently identified on college campuses, independent of ability or interest domain.

Finally, although ENTJ was not formerly identified in the earlier research study as significantly above what one would expect of an average population, this data offers that objective. Perhaps, additional insight is evidenced when looking at both the current and former data with a common lens, recognizing the connection between the most identified type of ENTJ with this study. The two elevated outlier types identified in this data of

ENFP and ENTP, the most identified type with the larger Texas study of ENFP, are seen together. While MSU Honors College students' preferences for ENTJ are apparent and outside the norm, the ancillary data, which evidences outlier data for both ENFP and ENTP, all enjoy an Extraversion and Intuitive (EN) preference setting. The Texas data reinforces this interpretation as that larger comprehensive population of data also evidences a dominant preference of ENFP, led by Extraversion and Intuition (EN) for college students. Separate and unique for this research outcome, however, is the awareness that the sample data of MSU Honors College students with top academic potential, matriculating to STEM careers aligns with their college peers in Extraversion and Intuition (EN) but separated themselves as a group and a subset of the whole by offering significant densities in Thinking and Judging (TJ) over the masses preferences for Feeling and Perceiving (FP).

Future research should further expand and explore this population subset to determine whether a gender component to these type preferences offers significant sway, especially when one recognizes that STEM fields remain an area dominated by males. Specifically, since "women make up only 28% of the workforce in STEM, and men vastly outnumber women majoring in most STEM fields in college. . .like computer science and engineering" (The STEM gap, 2020). Additionally, it would be helpful to determine the specific STEM majors associated with the type preferences. Furthermore, the outstanding variation which led to such a dominant sample group preference for ENTJ warrants further exploration and validation. Finally, this information also lends itself to the greater academic and overall intellectual capital in the field of MBTI type research, allowing further understanding and exploration into how a select group of Mississippi State University Honors College Freshmen, majoring in STEM fields, process information and respond to stressors, all based on their MBTI type preferences.

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