Gender and Characteristics

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Question Statement

There are certain qualities and characteristics that are attributed as innate to men and women. In books and film, women are largely characterized as compassionate and organized while men are portrayed as ambitious and decisive and the who genders rarely display the other's features except as a novelty. However, I want to find out if these traits are also believed by people in the workplace.

Statistical Plan

I went on to Pew Research Center's website and found data they gathered through an online survey on gender and leadership in November of 2014. A total of 914 men and 921 women responded. The numbers on the data are rounded percentages. One section of the survey asked if the person thinks each characteristic is more true of men or more true of women. It is this section that I will be basing my calculations off. This date will be on Table 1 and 2.

Problem Solution

We would like to know that whether men are more decisive than women and whether women are more compassionate than men.

Null Hypothesis 1:

- H0: People believe men are not more decisive than women. $p = 0.5$.

Alternative Hypothesis 1:

- Ha: People believe men are more decisive than women. $p \neq 0.5$.

The estimated proportion of people who believe men are not more decisive is:

$$\hat{p} = \frac{9+62}{100} = 0.71 \quad (1)$$

The estimated standard deviation is:

$$\hat{s} = \sqrt{\frac{.71 \times .29}{100}} = 0.0458 \quad (2)$$

The Z-statistic is:

$$Z = \frac{.71-.5}{.0458} = 4.625 \quad (3)$$

Because the p-value, 0.999998, is greater than the alpha value, .5, we accept H0 under 95% significant level.

Null Hypothesis 2:

- H0: People believe women are more compassionate than men. $p = 0.5$.

Alternative Hypothesis 2:

- Ha: People believe women are not more compassionate than men. $p \neq 0.5$.

The estimated proportion of people who believe men are more decisive is:

$$\hat{p} = \frac{65}{100} = 0.65 \quad (1)$$

The estimated standard deviation is:

$$\hat{s} = \sqrt{\frac{.65 \times .35}{100}} = 0.0477 \quad (2)$$

The Z-statistic is:

$$Z = \frac{.65 - .5}{.0477} = 3.145 \quad (3)$$

Because the p-value, .9992, is greater than the alpha value, .5, we accept H0 under 95% significant level.

Conclusion

We conclude that people believe that men are not more decisive than women and that women are more compassionate than men by using a significant level 95% hypothesis testing procedure. We are also curious about the people that voted that both genders were equal in these qualities. However, we were able to add this vote to the calculations on the opposition of each section.

Table 1: Decisiveness

Total		Men	Women
27	More True of Men	32	24
9	More True of Women	6	11
62	Equally True of Both	59	64
2	No Answer	3	1

Table 2: Compassion

Total		Men	Women
2	More True of Men	2	2
65	More True of Women	61	68
32	Equally True of Both	34	29
2	No Answer	2	1