The MBTI Map

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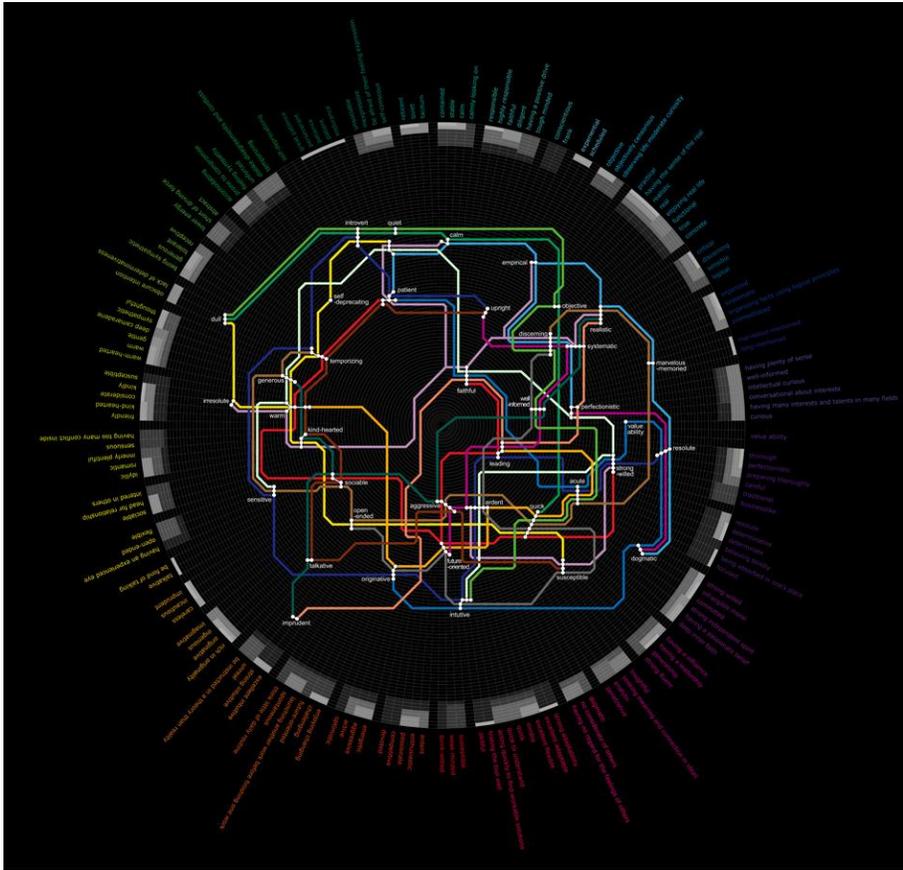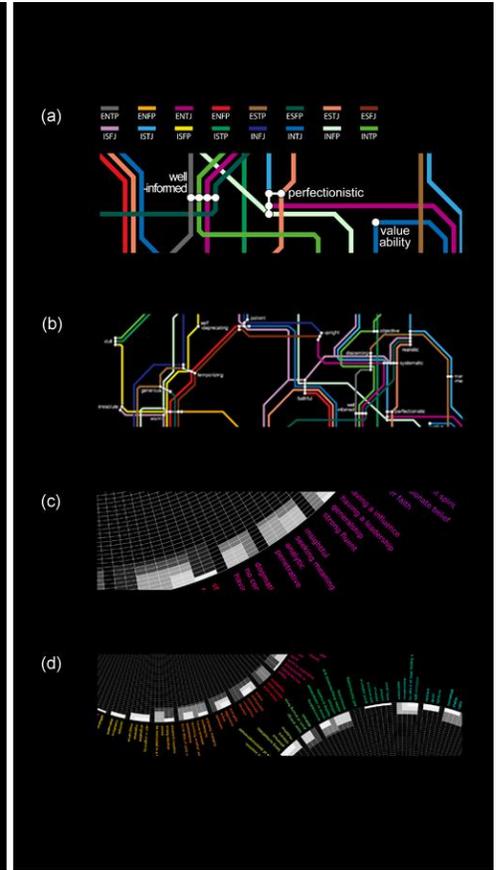
Figure 1: The MBTI map

Figure 2: detailed view of the MBTI map (a) Subway Line
(b) Subway station (c) Circle (d) Color

Abstract

The MBTI map is a way to represent relationships among the words that describe people's personalities. Derived from the methodology of knowledge visualization, the map shows an objective way of grouping people's personalities. Using the 161 words in the MBTI test which describe various personalities, we conducted a survey asking the relative closeness between pairs of words. A total of 39 factors-representative words- were extracted using the cluster analysis method. These 39 representative words were then arranged spatially using the Multi-Dimensional Scaling (MDS) method. The resulting map shows the 39 representative words of human personality, and also represents the original 161 words hierarchically in the MBTI.

KEYWORDS: MBTI, Personality, Information Design, Metaphor, Knowledge Visualization

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1   Introduction

The field of personality has been investigated in psychology and sociology, but seldom in the area of visual communication and information design. Because personality is a subjective matter, it is often assumed to be difficult to represent visually. In other words, attempts at visualizing personalities and characteristics have not achieved a universal agreement on their objectivity. This study attempts to propose an objective method of visualizing personalities by converging the idea of the MBTI test with information design theories. Such an attempt, then, would provide people with an effective way of grasping the complex and confounding structures of human personalities.

2   MBTI Analysis

The MBTI is a test designed to identify certain types of psychological characteristics. A total of 16 types of personalities can be identified with the test, and a total of 161 words are used to depict one's emotions, feelings, and sensibilities.
A survey was conducted on a sample of 20 university students. The participants were asked to rank the degree of closeness between dyadic pairs of the 161 words in the MBTI. The purpose of the survey was to identify how these concepts and ideas – describing personalities – are congruently clustered together in lay-people's minds. We, then, conducted a cluster analysis to extract the dimensions of the 161 words. The analysis resulted in a total of 39 factors that we call "representative words". Based on the analysis, we also obtained the distances among the 39 representative words using the Multi-Dimensional Scaling (MDS) method. MDS is a method to measure relative distances among entities in two-dimensional space. In addition, MDS can display relative

location based on physical distance as well as cognitive distance. In this graph using MDS method, the x-axis represents from warm to cool, and y-axis from dynamic to quiet (Figure 3). We believed that the MDS method, then, represents the web of relationships among the representative words which are used in describing human personalities.
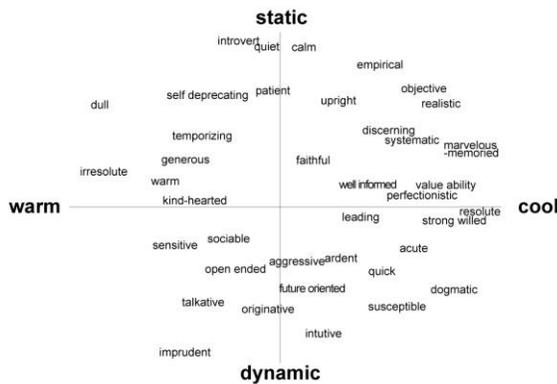

Figure 3: 39 representative words on the graph using MDS method

3 The MBTI Map Representation

3.1 Visualization

The MBTI map (http://design.ajou.ac.kr/~thembtimap) is a form of knowledge visualization, which shows complex relationships among the words in an effective way. Figure 1 shows its overall view. Knowledge visualization refers to a visualization methodology that conveys subjective and complex concepts, constructs, and ideas in a visible and manageable way. This visualization method is based on collective intelligence. That is, we measured the distances and semantic relationships among the words that describe personalities based on lay people's evaluation and judgment; and converted this data into a map, which is, then, recognizable as a guide-line for understanding personality. The MBTI map was employed in two distinctive ways to achieve the knowledge visualization. The first is a subway metaphor. Using a subway line as a metaphor is an effective way of emphasizing the connections among the 39 representative words. The metaphor also represents the overlapping intersections and the relationships among the 39 representative words and 16 types of personalities. The latter method is achieved through the way that the 161 words used in the MBTI are arranged hierarchically in the outer circle. We discuss each step in the next section.

3.2 Subway Map

Using the subway line as a metaphor, the MBTI Map intuitively represents the relationships among the 39 representative words. Each subway line indicates one of the 16 MBTI personality types. Figure 2(a) show that each line represents each type of MBTI. The map helps the users grasp the overall picture of the complex relationships among the words. This was achieved by minimizing the repetitions of colors and intersections among the words. All stations are arranged based on the semantic distance from the MDS analysis (Figure 2(b)). In this way, the users not only intuitively grasp the relationships among each of the 39 representative words, but also understand the relationships among the 16 MBTI personality type and 39 representative words.

3.3 Spatial hierarchy

The relationships among the 161 words used in the MBTI test are arranged around the outer circle (Figure 2(c)). The circle has 8 levels, which represent the hierarchical orders. Each level is divided by the 161 words. The brightness of each rectangle area represents that the closeness between the representative words and the 161 words. For example, if two words are very close to each other in meaning, the inner part of that rectangle is lit with bright colors.
This spatial hierarchy structure effectively utilizes the physical space. This is represented not by line but by area, similar with a tree map. The 161 personality words intuitively correspond to colors. The 161 words consist of 39 groups, each with a representative word, and each group has a different color (Figure 2(d)). For instance, 'ardent' is red while 'calm' is blue.

4 Conclusion

The MBTI Map allows users to recognize their personality type by understanding the relationship among personality words and representative words. The MBTI Map used the subway line as a metaphor to emphasize the connection among the 39 representative words. The map also effectively expresses the intersections of personality with the representative words. By applying a metaphor to knowledge visualization, users are more likely to understand the complex structure of personalities. Hereby, users can intuitively and effectively recognize the relations among representative words in the 16 types of personality of the MBTI. It is possible to effectively represent people's personalities using this methodology of knowledge visualization.

Acknowledgements

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