Introduction

Uncertainty is an emotion that is normally associated with negative feelings, and as humans, we tend to attempt to reduce it (Wilson, Canterbar, Kermer, & Gilbert, 2005). Reducing uncertainty is adaptive because it makes our surrounding environment more predictable and in turn, less stressful to us (Bar-Anan, Wilson, & Gilbert, 2009). Making sense of the world is a tendency of human beings; we pursue knowledge and gain from what we have already learned. However, we are often left uncomfortable or anxious when our efforts are thwarted. Alternatively, individuals sometimes enjoy a degree of uncertainty. Mystery novels and thrillers are less exciting and fulfilling. Wilson et. al.’s (2005) paradox explains that our first reaction is to reduce uncertainty so that we can become comfortable, but ironically, this reduces the pleasure we obtain from positive events.

For the present study, we predicted that there would be an observable threshold for uncertainty, that is, the point where uncertainty is overwhelming and causes negative feelings. Also, there should be a relationship between personality measures and individual thresholds for uncertainty, measured by number circling tasks of different complexity.

Abstract

This study measured participants’ preference for an element of uncertainty measured by their rated preference for number circling tasks varying in complexity and difficulty. The subjects also completed various personality questionnaires quantifying traits such as need for cognition, openness to experience, need for closure, uncertainty response, and uncertainty tolerance. Participants tended to enjoy the less complex task and those high in openness and need for cognition tended to like the tasks more than those low in these dimensions.

Methods

Participants: A sample of 69 introductory psychology students at Roanoke College completed the study for partial credit to fulfill course requirements. There were no restrictions on who was allowed to participate in the study.

Stimuli: Subjects initially completed a task booklet consisting of three number circling tasks. The booklet presented the least complex task first, then the moderately complex task and finally the highly complex task. Following each level of the task was a short survey to indicate the subjects’ reactions to the task. The subjects also completed a survey that included a number of personality measures.

Procedure: Participants provided informed consent upon arrival, and soon after began the number circling portion. After finishing the task portion, the subjects completed a survey that included a number of personality measures.

Results

In this study, we were interested in how uncertainty affects attitudes toward tasks varying in complexity. We examined the participants’ rated preference for three different number circling puzzles along with several individual difference measures intended to indicate one’s preference for complexity (e.g. openness to experience, need for cognition). We also looked at need for cognition using a 2 (low vs. high need for cognition) x 3 (low, moderate, and high in complexity of task) repeated measures ANOVA was conducted. In other words, participants who were low in openness rated the task lower (M = 4.71), followed by the moderately complex task (M = 4.95), and finally, participants rated the least complex task as the most enjoyable (M = 5.04). Planned comparisons revealed a significant difference between low and high complexity, F(1,67) = 4.68, p = .034, \( \eta^2 = .065 \) as well as between moderate and high complexity, F(1,67) = 4.20, p = .044, \( \eta^2 = .059 \). There was also a significant main effect for openness to experience, F(1,67) = 4.943, p = .030, \( \eta^2 = .069 \) (see Figure 1). That is, participants who were low in openness rated the task lower (M = 4.61) than participants who were high in openness (M = 5.19). The interaction was not significant.

Other researchers have proposed that gaining certainty about our surroundings is adaptive, but it also makes them less exciting and fulfilling. Wilson et. al.’s (2005) pleasure paradox explains that our first reaction is to reduce uncertainty so that we can become comfortable, but ironically, this reduces the pleasure we obtain from positive events. For the present study, we predicted that there would be an observable threshold for uncertainty, that is, the point where uncertainty is overwhelming and causes negative feelings. Also, there should be a relationship between personality measures and individual thresholds for uncertainty, measured by number circling tasks of different complexity.

Discussion

Since many factors in our results were approaching significance, we believe that the predicted relationship may have some effect. However the manipulation in this study was weak; the number circling tasks were mundane and meant little to the participants. It is possible that one would see stronger relationships if participants were asked to complete tasks that were more engaging.

Results did, however, provide a few relationships that reveal some understanding about the nature of this research. To begin, there are some interesting implications concerning the subjects’ enjoyment of the tasks. Openness to experience proved to be an important factor in task enjoyment; those who scored high in openness in experience reported that they enjoyed the tasks more. Need for cognition was also important. Subjects who were high in need for cognition enjoyed the tasks more overall and rated each task similarly in enjoyment. Contrarily, those who were low in need for cognition enjoyed the tasks less as complexity increased.

References


Individual Preferences for Uncertainty: An Ironically Pleasurable Stimulus

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Figures

Figure 1.

Figure 2.

Figure 3.

Figure 4.