The Influence of Field Independence on Ambiguous Figure Perception
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Ambiguous figures is a term that describes visual images containing more than one perceivable figure; famous examples of these are the Necker Cube and the Old/Young Woman images. A person, however, can only perceive one image at a time when viewing an ambiguous figure, and the rate at which a person can change its focus from one image to the other has been linked to many other aspects of psychology. This study focuses on the relationship between ambiguous figure reversal rates and original thinking, a major part of creativity. Original thinking has been linked to field independence, a problem-solving strategy that discards irrelevant information and focuses on the task at hand. For this study, 20 Belmont students will complete a field independence test and then view three ambiguous figures, one at a time, and asked to report the image they saw and how easy it was to see two figures. We expect to support the hypothesis that subjects with higher field independence will more easily reverse ambiguous figures.

The Effects of Multisensory Stimuli on Choice Blindness
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Major: Honors

Change blindness is a term referring to the human inability to detect large-scale changes in stimuli when the changes are not the primary focus of the subject’s attention. Similarly, choice blindness refers to the human inability to recall one’s previously stated preference. Previous research has presented subjects with two stimuli and asked them to choose a preference. Afterwards, they were shown the stimulus they did not prefer and asked why they chose it. Often, subjects contrived a reason for choosing the option they in fact did not choose, demonstrating that humans can be blind not only to change, but to their own choice. The aim of this study is to discern whether multisensory stimuli have an effect on choice blindness. In this study, eleven subjects were presented with thirteen pairs of photographs in succession and asked to choose the one they preferred. Six of these pairs of photographs were accompanied by music and seven were not. Once the subject chose a photograph, they were either shown the photograph they chose or the photograph they did not choose and asked to explain why they chose it. Of the thirteen trials, the subjects were shown their false choice four times. The expected result of the study was that subjects would be more likely to notice change when music was playing.
Identification of Illusory Contours of Differing Color Schemes
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Illusory contours are shapes perceived in the absence of defined, luminous, or chromatically gradient lines. In illusory contour research, the stimuli presented are often created by opposite colors; for example, black and white. In this study, 15 students were tested to identify illusory contours created by different color combinations. Forty illusory contour image PowerPoint slides were created, consisting of one of 5 different illusory images colored either with opposite colors (e.g. red-green) or of more similar colors (e.g., yellow-brown). The subjects were shown the slides one at a time, asked to identify the shape they saw created by the illusory contours, and researchers timed their recognition responses. The expected outcome of this study is that the shapes created by illusory contours in closer colors are harder to distinguish than those created with opposite colors, and the identification difficulty will result in larger response times.

Interocular Transfer of Visual Aftereffects in Relation to Motion and Color
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The phenomena of motion after-effect (MAE) is one of the most well-known and intriguing visual illusions. Research surrounding interocular transfer and color afterimage regarding this illusion has found MAE to be a consequence of adapting relational-motion detectors for relative motion, and color to be an important variable in regards to a binocular viewing of the stimulus. This presents the problematic question of whether or not color afterimage, like motion after-effect, is a result of relative, and not retinal, motion. In the current study, the degree to which interocular transfer affects color afterimage was examined. It was hypothesized that the eye that is presented with the adaption stimulus would perceive both motion aftereffect and color afterimage, while the eye that was not presented with the adaption stimulus would perceive motion aftereffect and would not perceive color afterimage. Twelve undergraduate students were exposed to either red, blue, green, or yellow spinning optical illusions in both their same-eye and cross-eye, and a subsequent white stationary image of the illusion. They then recorded to what degree they perceived motion aftereffect movement and color afterimage or both when viewing the white image. We expect that both same-eye and cross-eye observations will result in motion aftereffect, while only same-eye observations will result in color
afterimage. Therefore, the expected conclusion is that color afterimage is not a result of relative motion.

**The Effects of Semantic Satiation on the Impact of Words with Positive and Negative Connotations**

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Semantic satiation occurs when a word is repeated consistently for a period of time, during which the listener will experience a temporary loss of meaning for the spoken word. Previous research shows that physical stimuli – standing while listening to “standing” – affect the degree of meaning that a word can lose. This experiment tests the effect of emotional stimuli on semantic satiation by comparing the satiation of positively connoted and negatively connoted words. Positively connoted words are classified as uplifting and comforting words, while negatively connoted words are classified as diminishing and depressing words. Thirteen Belmont students will listen to the words (one positively connoted and one negatively connoted in a random order) repeated for thirty seconds and rate the emotional stimulation before and after the repetitions on a scale of one to ten. The expected outcome of this study is that the subjects will become more satiated with the positively connoted words than the negatively connoted words.