Name_____

Evidence Based Question: Perception

Answer the Following Questions:

Using the sources provided, develop and justify an argument about top-down processing and visual perception.

A. Propose a specific and defensible claim based in psychological science that responds to the question.

B. Support your claim using at least one piece of specific and relevant evidence from one of the sources.

Support your claim using evidence from source 1, 2 or 3. Cite source (Source A) "According to Source A…"

C. Explain how the evidence from Part B supports your claim using a psychological perspective, theory, concept, or research finding learned in AP Psychology. **You must apply 1 of the following terms: selective attention, schemas, perceptual set, inattentional blindness, perceptual constancies, apparent movement**

Support Claim using one of the psychological terms listed. Use term to explain/relate to claim.

D. Support your claim using an additional piece of specific and relevant evidence from a different source than the one that was used in Part B (i).

E. Explain how the evidence from Part D supports your claim using a different psychological perspective, theory, concept, or research finding learned in AP Psychology than the one that was used in Part B. **You must apply 1 of terms selective attention, schemas, perceptual set, inattentional blindness, perceptual constancies, apparent movement**

Introduction

Simons and Chabris (1999) Gorillas in our Midst: Sustained Inattentional Blindness for Dynamic Events

Background and aim: In order for us to detect change, attention is required. Change blindness is where individuals often do not detect large changes to objects and scenes from one view to the next. Inattentional blindness occurs when attention is diverted to another object or task and observers often fail to perceive an unexpected object, even if it occurs at the point of fixation. The aim of this study is to build on previous research into divided visual attention

Participants

228 volunteers (mostly students), known as 'observers,' took part in the study and were either given a large candy bar for doing so, or were given a fee for taking part in a number of studies. 36 participants' data was removed, which led to 16 groups of 12 individuals. A controlled observation also took place, in which 12 different participants watched a video in which a gorilla thumped its chest. 21 experimenters carried out the research; procedures were standardized and followed a written protocol. Participants were tested individually and gave informed consent

Method

This study was a laboratory experiment with an independent measures design. The IV was the condition the participant took part in: 1- The Transparent/Umbrella Woman condition, 2- The Transparent/Gorilla condition, 3- The Opaque/Umbrella Woman condition, 4- The Opaque/Gorilla condition. Within each condition there were four task conditions: 1- White/Easy, 2- White/Hard, 3- Black/Easy, 4- Black/Hard. Therefore there were 16 different conditions. The DV was the number who noticed the unexpected event which was either the umbrella woman, or the gorilla.

Four video tapes, 75 seconds long were created, each tape showed two teams of three players, one team wearing white shirts, the other black shirts. Each team passed around a standard orange basketball to one another in a standardized order: player 1→ player 2 → player 3 →player 1 etc. Players also dribbled the ball and made various other movements. After 44 to 48 seconds of action, an unexpected event occurred for 5 seconds. In the Umbrella-Woman condition, a tall woman holding an open umbrella walked from on one side of the action to the other, left to right. In the Gorilla condition, a shorter woman wearing a full body gorilla costume walked through the action in the same way and the players continued as normally during and after. There were two styles of video, in which the unexpected person/gorilla was clearly seen (opaque) or was transparent.

Participants were told they'd be watching two teams of three players passing basketballs and they were instructed to pay attention to the white or black team (the black and white conditions) and to count the number of passes made or the number of bounce passes and aerial passes made by the attended team – these were the easy and hard conditions respectively. They were then asked to write down the number of passes they counted.

Following this task participants were asked some additional questions - Did you notice anything unusual in the video? Did you notice anything other than the six players? Did you see a gorilla/woman carrying an umbrella walk across the screen? Further details were asked for if they answered yes and no further questions were asked. They were also asked if they had taken part in a similar study or had heard of this phenomenon; if this was the case their results were removed. Debriefing then took place.

Results and Discussion

Overall, 54% noticed the unexpected event and 46% did not. 67% of participants noticed the unexpected event in the opaque condition, compared to only 42% in the transparent condition. More participants noticed the unexpected event in the easy condition compared to the hard condition – 64% vs 45%. While the effect of task difficulty was greater in the transparent condition, the Umbrella Woman was noticed more often than the Gorilla overall (65% versus 44%).

Results from the controlled observation were that only 50% noticed the event (roughly the same as the percentage that noticed the normal Opaque/Gorilla walking event (42%) under the same task conditions).

Conclusions: We can conclude that individuals do have inattentional blindness for dynamic events. They will often fail to notice a seemingly obvious, but unexpected event if they are engaged in another monitoring task. The extent of inattentional blindness is dependent on the difficulty of the primary task. We are more likely to notice unexpected events if these events are visually similar to the events we are paying attention to. Without attention we have no conscious perception – objects can pass through the spatial extent of attentional focus, but still not be 'seen' if they are not attended to

Gorillas in our midst: sustained inattentional blindness for dynamic events Perception, 1999, volume 28, pages 1059 ^ 1074 Daniel J Simons, Christopher F Chabris Department of Psychology, Harvard University, 33 Kirkland Street, Cambridge, MA 02138, USA; e-mail: dsimons@wjh.harvard.edu Received 9 May 1999, in revised form 20 June 1999

Source B

Introduction

The Damaging Effect of Confirming Feedback on the Relation Between Eyewitness Certainty and Identification Accuracy

The authors investigated eyewitnesses' retrospective certainty (see G. L. Wells & A. L. Bradfield, 1999). The authors hypothesized that external influence from the lineup administrator would damage the certainty—accuracy relation by inflating the retrospective certainty of inaccurate eyewitnesses more than that of accurate eyewitnesses (N = 245).

Participants

Participants were 245 undergraduate psychology students at a large midwestern university. Students received extra course credit in their psychology courses in return for their participation.

Method

Video. Participants watched a 3-min video in which a young man was captured engaging in a series of behaviors: huddling over a ventilation pipe, looking directly into the camera, and so forth. At least three times the man looked directly into the camera. Therefore, there were several opportunities for participants to get a clear view of the man's face.

Lineup. Participants viewed one of two six-person videotaped live lineups. In the culprit-present lineup, the culprit appeared in Position 1. In the culprit-absent lineup, the culprit was removed, and someone matching his general description took his position. Each man in the lineup held a piece of paper on which a number (1—6) was printed. The video opened with a shot of all six men on the screen, then moved into a close-up of each man, and ended with another shot of all six men.

Dependent measures questionnaire. Participants completed a dependent measures questionnaire containing questions about 10 testimonial judgments.

Results

Participants who heard confirming feedback recalled having greater certainty in the accuracy of their identification than did participants in the control condition. The main effect for accuracy was also significant: Participants who made an accurate identification recalled having greater certainty than did participants who made an inaccurate identification. In addition, the interaction between accuracy and feedback was significant. Simple main effects tests indicated that, for inaccurate witnesses, retrospective certainty reports were significantly higher in the confirming feedback condition ($M = 67.76$) than in the control condition ($M = 49.35$, $d = 0.62$), (118) -— 3.56, $p < .01$. However, for accurate witnesses, retrospective certainty reports were equivalent in the confirming feedback ($M = 85.00$) and control conditions ($M = 80.31$, $d = 0.21$), (125) - 1.19, $p = .24$.

This experiment replicated previous research on the post-identification feedback effect (e.g., Wells & Bradfield, 1998, 1999). Participants who heard information suggesting that their identification was correct (i.e., confirming feedback) inflated their recollections on a number of testimony-relevant judgments. It is important to note that feedback distorted participants' recollections of events that occurred before feedback was given (certainty at the time of the identification, ease with which the identification was made, etc.). Therefore, the effect of feedback on witnesses' recollections is an illusion of sorts because participants were randomly assigned to conditions after having viewed the event and after having made their identification.

The Damaging Effect of Confirming Feedback on the Relation Between Eyewitness Certainty and Identification Accuracy

Source C

Introduction

The purpose of this experiment was to investigate how information supplied after an event influences a witness's memory for that event

Participants

Subjects were 195 students from the University of Washington who participated in groups of various sizes.

Methods

The subjects saw the same series of 30 color slides, seeing each slide for approximately 3 sec. Approximately half of the subjects saw a slide depicting a small red Datsun stopped at a stop sign, whereas the remaining subjects saw the car stopped at a yield sign. Immediately after viewing the acquisition slides, the subjects filled out a questionnaire of 20 questions. For half of the subjects, Question 17 was, "Did another car pass the red Datsun while it was stopped at the stop sign?" For the other half, the same question was asked with the words "stop sign" replaced with "yield sign." Thus, for 95 subjects, the sign mentioned in the question was the sign that had actually been seen ; in other words, the question contained consistent information. For the remaining 100 subjects, the question contained misleading information. After completing the questionnaire, the subjects participated in a 20-min filler activity that required them to read an unrelated short story and answer some questions about it. Finally, a forced-choice recognition test was administered. Using two slide projectors, I5 pairs of slides were presented, each pair of slides being projected for approximately 8 sec. One member of each pair was old and the other was new. For each pair, the subjects were asked to select the slide that they had seen earlier. The critical pair was a slide depicting the red Datsun stopped at a stop sign and a nearly identical slide depicting the Datsun at a yield sign. The slides that the subjects actually saw varied in the left and right positions.

Results and Discussion

The percentage of times a subject correctly selected the slide he or she had seen before was 75 and 41, respectively, when the intervening question contained consistent versus misleading information, $Z = 4.72$, $p < .001$. If 50% correct selection is taken to represent chance guessing behavior, subjects given consistent information performed significantly better than chance, $Z = 5.10$, $p < .001$, whereas those given misleading information performed significantly worse than chance, $Z = 1.80$, $p < .05$ (one-tailed test).