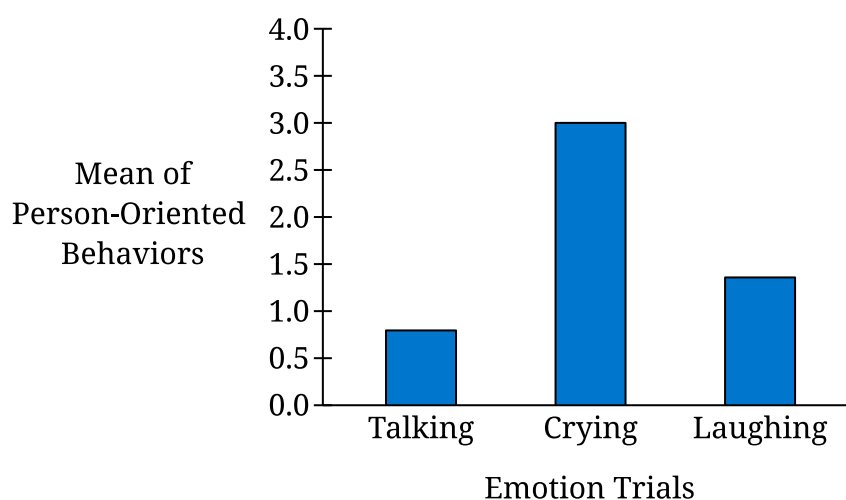


Behavior	Dogs Looking	Dogs Making Contact	Dogs Approaching	Dogs Vocalizing	Total Person-Oriented Behaviors
Stranger laughing	11	7	2	0	20
Totals	71	38	20	6	135

The graph displays the means for the number of person-oriented behaviors for the three types of emotions. The results are statistically significant ($p < 0.0011^1$):

Mean of Person-Oriented Behaviors for Emotion Trials



The results show that the crying trial elicited significantly more person-oriented behaviors than the laughing and talking trials. The mean of person-oriented behaviors when the owner and stranger-researcher were crying significantly differed from the means for laughing and talking, but the means for laughing and talking did not significantly differ from each other. Importantly, dogs primarily engaged with the individual who was crying, regardless of whether they were the owner or the stranger-researcher. In the owner-crying trial, dogs demonstrated person-oriented behaviors 75% of the time, and in the stranger-researcher-crying trial, dogs demonstrated the person-oriented behaviors 73% of the time.

Meyers-Manor, J. E., & Botten, M. L. (2020). A shoulder to cry on: Heart rate variability and empathetic behavioral responses to crying and laughing in dogs. *Canadian Journal of Experimental Psychology / Revue canadienne de psychologie expérimentale*, 74(3), 235–243.

1: p values indicate statistical significance. A p value of less than 0.05 is generally considered significant and increases the likelihood that the difference in means is due to the procedures of the study.

The question has three parts: Part A, Part B, and Part C. Use the three sources provided to answer each part of the question.

For Part B and Part C, you must cite the source that you used to answer the question. You can do this in two different ways:

- Parenthetical Citation:
For example: "...(Source 1)."
- Embedded Citation:
For example: "According to Source 1..."

Write the response to each part of the question in complete sentences. Use appropriate psychological terminology.

2. Using the sources provided, develop and justify an argument about a specific social condition that leads people to be more likely to help another person in an emergency.
- A. Propose a specific and defensible claim based in psychological science that responds to the question.
- B.
- i. Support your claim using at least one piece of specific and relevant evidence from one of the sources.
 - ii. Explain how the evidence from Part B (i) supports your claim using a psychological perspective, theory, concept, or research finding learned in AP Psychology.
- C.
- i. 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).
 - ii. Explain how the evidence from Part C (i) 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 (ii).

Source 1

Introduction

In this study, researchers investigated environmental factors that may influence whether a person will help in an emergency.

Participants

Students in introductory psychology courses at a university in New York took part in the experiment as part of a class requirement. Fifty-nine of the participants were women and 13 of the participants were men. Researchers did not report race/ethnicity data for participants in the study.¹

Reporting Category	Scoring Criteria	
Part B Research Variable (0–1 points)	0 points Does not state a measurable or quantifiable definition of the identified variable used in the study	1 point States a measurable or quantifiable definition of the identified variable as used in the study
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: <ul style="list-style-type: none"> • The response states a definition of person-oriented dog behaviors in the study that is not measurable or quantifiable. • The response does not state a measurable or quantifiable definition of person-oriented dog behaviors as used in the study. 	Responses that earn this point: <ul style="list-style-type: none"> • The response states that person-oriented dog behaviors are defined as the number of times a dog looked at a person, contacted a person, approached a person, and/or vocalized at a person in the study. • The response states researchers measured person-oriented dog behaviors as the dog looking at, making contact, approaching, or vocalizing at the people.
	Examples that do not earn this point: <ul style="list-style-type: none"> • <i>“The researchers studied how emotionally close the dogs were to their owners.”</i> • <i>“The operational definition of person-oriented dog behavior is the 2-minute lighthearted conversation the stranger-researcher and the owner had.”</i> • <i>“The operational definition of person-oriented dog behaviors includes passive behavior like lying down or sitting.”</i> 	Examples that earn this point: <ul style="list-style-type: none"> • <i>“The researchers operationally defined person-oriented dog behaviors as the number of times they looked at the person or barked at the person.”</i> • <i>“The researchers defined person-oriented dog behaviors as making contact or approaching the people.”</i>

Reporting Category	Scoring Criteria	
Part C Statistic Interpretation (0–1 points)	0 points Does not accurately describe what the identified statistic indicates in relation to the study	1 point Accurately describes what the identified statistic indicates in relation to the study
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: <ul style="list-style-type: none"> • The response restates the mean of the person-oriented behaviors for the laughing group as compared to the talking group without directly relating them to the study. • The response does not accurately describe what the mean of the person-oriented behaviors for the laughing group as compared to the talking group indicates in relation to the study. • The response provides a definition of the mean of the person-oriented behaviors for the laughing group as compared to the talking group but does not accurately describe what it indicates in relation to the study. 	Responses that earn this point: <ul style="list-style-type: none"> • The response accurately describes the mean of the person-oriented behaviors for the laughing trials as being larger than the mean of the talking trials, which indicates that the dogs showed more person-oriented behaviors when the people laughed than when they were just talking. • The response accurately describes the means for the laughing and talking trials as not significantly different from each other, meaning that the difference in means between the talking trial and the laughing trial was likely due to chance or not due to the emotion.
	Examples that do not earn this point: <ul style="list-style-type: none"> • <i>“The mean of the laughing group is 1.3 and the mean for the talking group is .75.”</i> • <i>“The mean of the laughing group is significantly more than the mean of the talking group.”</i> [No explanation of what that indicates in the study.] • <i>“The mean is the average of the responses in the study. The dogs in the laughing group had a mean of 1.4 person-oriented behaviors.”</i> 	Examples that earn this point: <ul style="list-style-type: none"> • <i>“The dogs showed more person-oriented behaviors to people who were laughing than those who were just talking.”</i> • <i>“The dogs responded more to laughing than to talking.”</i> • <i>“Since the difference between the means of the laughing and talking trials was not significant, this means that the difference in means was probably due to chance.”</i> • <i>“There was not a significant difference between the two. This just indicates that the animal’s response was not due to laughing or talking.”</i>

Reporting Category	Scoring Criteria	
Part D Ethical Guidelines	0 points Does not accurately identify at least one ethical guideline applied by researchers in the study	1 point Accurately identifies at least one ethical guideline applied by researchers in the study
(0–1 points)	Decision Rules and Scoring Notes	
	Responses that do not earn this point: <ul style="list-style-type: none"> • The response does not identify an ethical guideline applied by researchers in the study. • The response identifies an ethical guideline that researchers should have applied but was not mentioned in the study. • The response identifies an ethical guideline not applied by the researchers in the study. • The response identifies other features of the study that are not ethical guidelines. 	Responses that earn this point: <ul style="list-style-type: none"> • The response identifies informed consent as an ethical guideline applied by researchers in the study. • The response identifies doing no unnecessary harm to the animals as an ethical guideline applied by the researchers in the study.
	Examples that do not earn this point: <ul style="list-style-type: none"> • <i>“It’s important to researchers to act ethically when conducting a study.”</i> • <i>“The researchers should have obtained the dog’s consent.”</i> • <i>“The researchers protected the confidentiality of the participants in the study.”</i> • <i>“The researchers gave dog biscuits as compensation, which is unethical.”</i> 	Examples that earn this point: <ul style="list-style-type: none"> • <i>“The researchers obtained informed consent from the dog owners.”</i> • <i>“The researchers made sure they did no harm to the animals, who could not give consent to be studied.”</i> • <i>“The researchers had the stranger and the dog owner have a cheerful conversation between trials to reset the emotional tone of the experience for both the dogs and the owners. This demonstrates that the researchers took steps to protect the participants from harm.”</i>

Reporting Category	Scoring Criteria		
Part F Argumentation (0–2 points)	0 points Does not accurately explain how the results of the study support or refute the psychological concept or hypothesis presented in the question	1 point Uses the results of the study but does not explain how the psychological concept or hypothesis is supported or refuted OR Explains that the psychological concept or hypothesis is supported or refuted but does not use any results from the study	2 points Uses a specific result from the study to explain how the results support or refute the psychological concept or hypothesis presented in the question. The results are accurately interpreted.
	Decision Rules and Scoring Notes		
	Responses that earn 0 points: <ul style="list-style-type: none"> The response does not explain how at least one of the research findings supports or refutes the idea that dogs' expression of person-oriented behaviors demonstrates stimulus discrimination in operant conditioning. The response does not accurately explain how at least one of the research findings supports or refutes the idea that dogs' expression of person-oriented behaviors demonstrates stimulus discrimination in operant conditioning. 	Responses that earn 1 point: <ul style="list-style-type: none"> The response proposes that the evidence alone is sufficient to demonstrate the idea that dogs' expression of person-oriented behaviors demonstrates stimulus discrimination in operant conditioning without additional explanation. The response uses at least one of the research findings to support or refute the idea that dogs' expression of person-oriented behaviors demonstrates stimulus discrimination in operant conditioning. However, the interpretation of the results of the study includes some inaccuracies. 	Responses that earn 2 points: <ul style="list-style-type: none"> The response accurately interprets at least one of the research findings to explain the idea that dogs' expression of person-oriented behaviors demonstrates stimulus discrimination in operant conditioning.
	Examples that earn 0 points: <ul style="list-style-type: none"> <i>"The study shows that stimulus discrimination happens in the study."</i> <i>"The dogs are demonstrating stimulus discrimination in how they respond to the people in the study."</i> 	Examples that earn 1 point: <ul style="list-style-type: none"> <i>"The study showed that dogs can tell the difference between the emotions their owners show."</i> [No evidence from the study.] <i>"The study shows that the dogs' responses to crying were significantly more than when the people were laughing or talking."</i> [No explanation.] <i>"The study shows the dogs responded to crying more than laughing or talking only to their owners, showing that they discriminate which type of emotion to respond to."</i> [Inaccurate interpretation of results.] <i>"This study showed that they did not discriminate between the owners and the strangers."</i> [No evidence from the study.] 	Examples that earn 2 points: <ul style="list-style-type: none"> <i>"The study shows that the dogs showed person-oriented behaviors more toward people who were crying than people who were laughing or talking, which supports the idea that dogs have learned to discriminate."</i> <i>"The dogs responded more to crying than laughing, so they discriminated between the emotions."</i> <i>"The study showed the dogs offered more person-oriented behaviors to the crying person than the laughing person, which means they had stimulus discrimination about the emotions that were being expressed."</i> <i>"The research findings refute the main hypothesis, as the hypothesis was that a dog's reaction would differ based on how well they knew the person, and while they did slightly differ, they stayed relatively the same throughout each test."</i>

			<ul style="list-style-type: none">• <i>“The difference between 75% and 73% is not a lot, which refutes that the dogs demonstrate stimulus discrimination, as they did not respond differently to who was crying, the owner or the stranger.”</i>
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Reporting Category	Scoring Criteria		
Part B (ii) Explanation and Application (Reasoning) (0–2 points)	0 points Does not explain the relationship between the evidence and the claim	1 point Explains the relationship between the evidence and the claim	2 points Applies a psychological perspective, theory, concept, or research finding to explain how the evidence supports the claim
	Decision Rules and Scoring Notes		
	Responses that earn 0 points: <ul style="list-style-type: none"> • The response does not accurately interpret the evidence. • The response identifies evidence without explanation of how it relates to the claim. • The response provides opinions with no reference to the sources provided. 	Responses that earn 1 point: <ul style="list-style-type: none"> • The response correctly interprets the evidence in supporting the claim, but does not apply a psychological perspective, theory, concept, or research finding. 	Responses that earn 2 points: <ul style="list-style-type: none"> • The response correctly interprets the evidence and correctly applies a psychological perspective, theory, concept, or research finding.
	Examples that earn 0 points: <ul style="list-style-type: none"> • <i>“The study showed that people say they want to help even when they don’t really do it.”</i> • <i>“Researchers found that at least one person intervened in 90.9% of the situations.”</i> • <i>“The evidence shows that helping is good to do.”</i> 	Examples that earn 1 point: <ul style="list-style-type: none"> • <i>“The study showed that the more people that are present in an emergency, the less likely an individual will help.”</i> • <i>“It didn’t seem to matter if the people witnessing the event were friends or just acquaintances. If they knew each other they were more likely to help the person.”</i> 	Examples that earn 2 points: <ul style="list-style-type: none"> • <i>“Onlookers to an emergency that know each other might be more likely to help a victim because of in-group bias. They identify the other onlooker as part of their group and immediately trust them believing that they can work together to help someone.”</i> • <i>“Their findings show that the more bystanders that are around during an emergency, the less likely someone will help. This is called the bystander effect.”</i>
	Additional Notes: <ul style="list-style-type: none"> • The explanation and application points can be earned even if the response did not earn the point in B (i) due to incorrectly cited and/or non-specific evidence. • The psychological perspective, theory, concept, or research finding must be explicitly identified in the <i>AP Psychology Course and Exam Description</i> (2024). • The presence of a citation indicates the sentence or phrase is intended to be evidence. All text before the citation will be considered evidence. Text after a citation will be considered reasoning, unless accompanied by another citation. • Concepts used in the sources that are not eligible to be used for the application point are “confederate,” “independent variable,” “dependent variable,” “experiment,” and “meta-analysis.” 		