Captcha

Are you a bot?

Liam says to Emma: "It's a beautiful day, isn't it?"

Who is Liam talking to? (case sensitive)

Are you a bot?

Mia says to Benjamin: "It's a beautiful day, isn't it?"

Who is Mia talking to? (case sensitive)

Are you a bot?

William says to Ava: "It's a beautiful day, isn't it?"

Who is William talking to? (case sensitive)

Are you a bot?

Amelia says to Noah: "It's a beautiful day, isn't it?"

Who is Amelia talking to? (case sensitive)

Are you a bot?

Evelyn says to James: "It's a beautiful day, isn't it?"

Who is Evelyn talking to? (case sensitive)

Intro_Consent

CONSENT FORM

DESCRIPTION: You are invited to participate in a research study in cognitive psychology. You will be asked to perform various tasks on a computer which may include: looking at images or videos, listening to sounds, reading scenarios, or playing games. You may be asked a number of different questions such as giving descriptions of what happened, making causal judgments, and intepreting people's actions. All information collected will remain confidential.

RISKS AND BENEFITS: Risks involved in this study are the same as those normally associated with using a computer (e.g., mild eye/arm strain). If you have any pre-existing conditions that might make reading and completing a computer-based survey strenuous for you, you should probably elect to not participate in this study. If at any time during the study you feel unable to participate because you are experiencing strain, you may end your participation without penalty. We cannot and do not guarantee or promise that you will receive any benefits from this study. Your decision whether or not to participate in this study will not affect your employment/medical care/grades in school.

TIME INVOLVEMENT: Your participation in this experiment will take ca. 8 minutes.

PAYMENTS: If recruitment materials indicate payment (e.g., Amazon or other recruitment), you will receive compensation as indicated.

SUBJECT'S RIGHTS: If you have read this notice and have decided to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. You have the right to refuse to answer particular questions. Your individual privacy will be maintained in all published and written data resulting from the study.

CONTACT INFORMATION: Questions, Concerns, or Complaints: If you have any questions, concerns or complaints about this research study, its procedures, risks and benefits, you should ask the Protocol Director, (Professor Tobias Gerstenberg, Phone: (650) 725-2431; Email: gerstenberg@stanford.edu).

INDEPENDENT CONTACT: If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the Stanford Institutional Review Board (IRB) to speak to someone independent of the research team via email at irb2-manager@lists.stanford.edu, or via phone at (650) 723-2480 or toll free at 1-866-680-2906. You can also write to the Stanford IRB, Stanford University, 3000 El Camino Real, Five Palo Alto Square, 4th Floor, Palo Alto, CA 94306.

You may want to print a copy of this consent form to keep. By clicking the button below, you acknowledge that you have read the above information, that you are 18 years of age, or older and give your consent to participate in our internet-based study and consent for us to analyze the resulting data.

Thank you for your participation in this experiment!

In this experiment, you will see a video clip showing what happened in an office of a company. You will then be asked a couple of questions about the clip.

Before you start watching the video clip, **it is important that you understand the background of what happened in the office**. On the next page, you will receive some information about the set up of the office. Please read them carefully.

If you are ready, click on the button below to continue.

Introduction

Suzy and Billy both work on a project for our nation's security. They work in the same office. In this office, there is a motion detector installed (Figure 1).

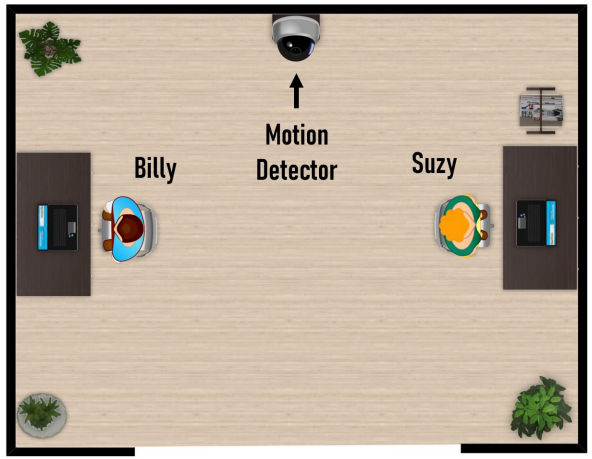


Figure 1. The office.

The motion detector in the office goes off *as soon as one person* arrives in the office.

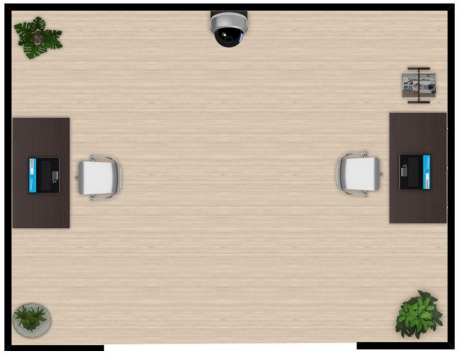


Figure 2. No one enters the office and motion detector does not go off.

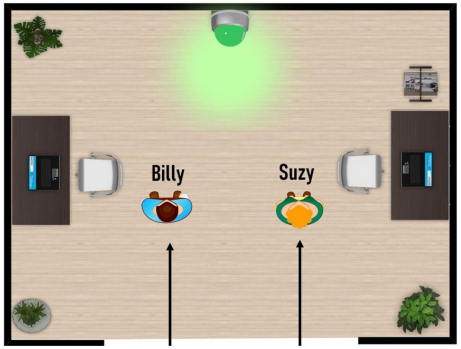


Figure 3. Billy and Suzy enter the office at the same time and the motion detector goes off.

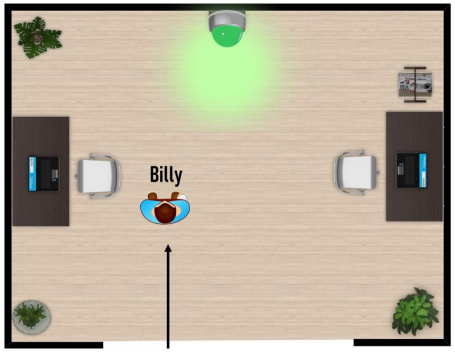


Figure 4. Billy enters the office and the motion detector goes off.

For example, in Figure 2 no one enters the office, and the motion detector does not go off.

In Figure 3, both Suzy and Billy enter the office at the same time, and the motion detector goes off.

In Figure 4, only Billy enters the office and the motion detector goes off.

Given the confidentiality of the project, it is sometimes required that one employee works alone in the office. As a result, on certain days the company's boss instructs either only Suzy or Billy to come into the office in the next morning, while the other one is supposed to stay out of the office on that morning.

Figure 5. The boss of the company gives the instructions for the next day.

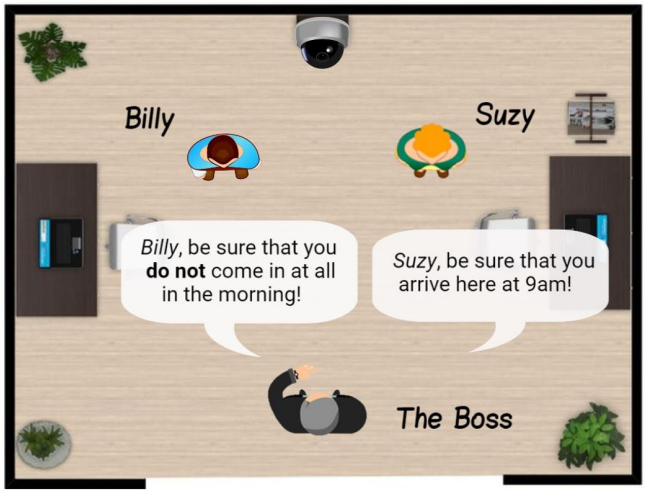


Figure 6. The boss of the company gives the instructions for the next day.

For example, in Figure 5 the boss tells Billy and Suzy that Billy is supposed to come into the office at 9am the next morning, while Suzy is not supposed to come into the office the next morning.

In contrast, in Figure 6, the boss tells Billy and Suzy that Suzy is supposed to come into the office at 9am the next morning, while Billy is not supposed to come into the office the next morning.

On the next page, you will be asked a few comprehension check questions.

Introcheck_1

If *two employees* enter the office at the same time, the motion detector will go off.

- ○ true
- ○ false

If *only one employee* enters the office, the motion detector will go off.

- ○ true
- ○ false

What kind of instruction does the company's boss give to the two employees?

- ○ One employee must arrive at 9am in the office while the other employee must not enter the office in the morning.
- ○ One employee must log into the company chat at 9am while the other employee must not log into the company chat in the morning.

Are the instructions by the boss always the same for the two employees?

- ○ Yes, one employee is always prohibited from doing something, while the other employee is always supposed to do something.
- ○ No, who is supposed to do the respective action and who is prohibited from doing so can vary from day to day.

Test_Questions_Correct

Great, you answered all questions correctly. You can now begin with the experiment!

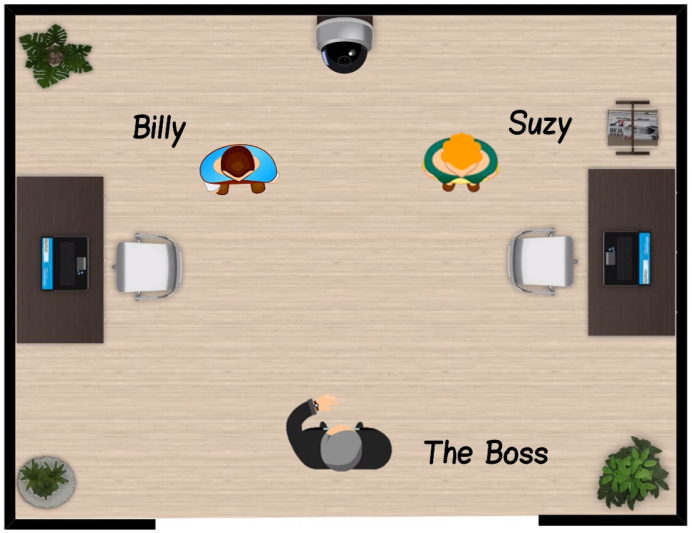
You will now watch a scene from the office. The first video will stop at the beginning of the clip and you will be asked some questions about the scenario. In a second video you will see the rest of the clip and will be asked some more questions.

The loading for the videos make take some time, so please wait until the videos appears and starts to play. You will be able to proceed to the next page via the "next" button when the video has finished and you have answered all questions.

Now click on the button below to continue.

Disjunctive_Billyabnormal

Video of what happened at the office the day before



How much do you agree with the following statements?

"Billy is allowed to come into the office at 9am the next morning".

Not at all Very much

"Suzy is allowed to come into the office at 9am the next morning".

Not at all Very much

"If only one of the two employees enters the office, the motion detector will go off."

Not at all Very much

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Last Click: *0 seconds*

Page Submit: *0 seconds*

Click Count: *0 clicks*

Video of what happens on the day

Which of the following statements better describes what has happened in this situation?

- ○ The motion detector went off because **Billy** entered the office.
- ○ The motion detector went off because **Suzy** entered the office.

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Last Click: *0 seconds*

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Disjunctive_Suzyabnormal

Video of what happened at the office the day before

How much do you agree with the following statements?

"Billy is allowed to come into the office at 9am the next morning".

Not at all Very much

"Suzy is allowed to come into the office at 9am the next morning".

Not at all Very much

"If only one of the two employees enters the office, the motion detector will go off."

Not at all Very much

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Last Click: *0 seconds*

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Click Count: *0 clicks*

Video of what happens on the day

Which of the following statements better describes what has happened in this situation?

- ○ The motion detector went off because **Billy** entered the office.
- ○ The motion detector went off because **Suzy** entered the office.

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Page Submit: *0 seconds*

Click Count: *0 clicks*

Interim Message

Well done so far!

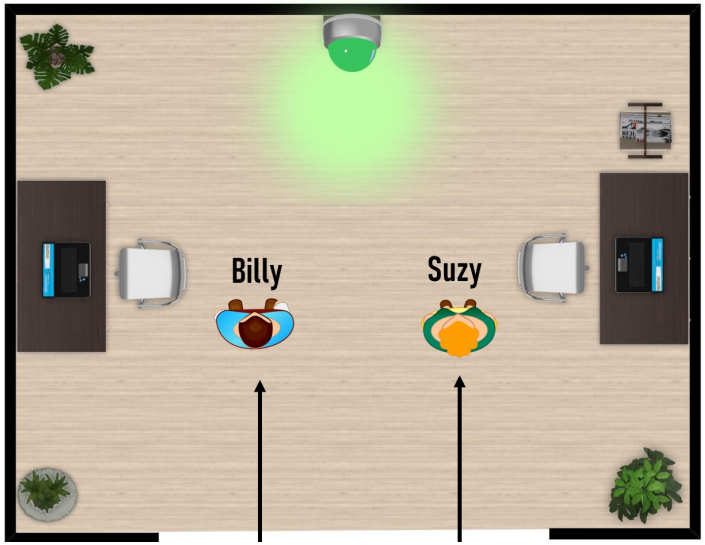
You will now get to see one more diagram of the office. However, in this diagram, some information about what happened is missing.

Your task is to figure out the missing information based on a statement that someone made who actually saw what happened.

Please click on the 'next' button if you are ready.

Final_Billyselected_Billyabnormal_left

The following picture shows the scene of a morning in the office on which both Billy and Suzy arrived at the office at 9am and the motion detector went off. However, the scene does not show the instructions of the boss for that particular day, i.e. whether Billy was supposed to come in at 9am and Suzy was supposed to not arrive in the morning, or whether Suzy was supposed to come in at 9am that morning, and Billy was not supposed to arrive in the morning.



Imagine that Ben also participated in the same experiment that you are doing right now. He saw a video clip of a morning in the office and had to choose an explanation for what has happened in this video. As part of the experiment, Ben observed the scene depicted above. He also saw the instructions that were given by the boss the day before, i.e. who was supposed to come into the office at 9am, and who was not. He was then given two statements to choose from to best describe what has happened in this situation. For the scenario above, Ben chose the following statement:

Which of the following statements better describes what has happened in this situation?

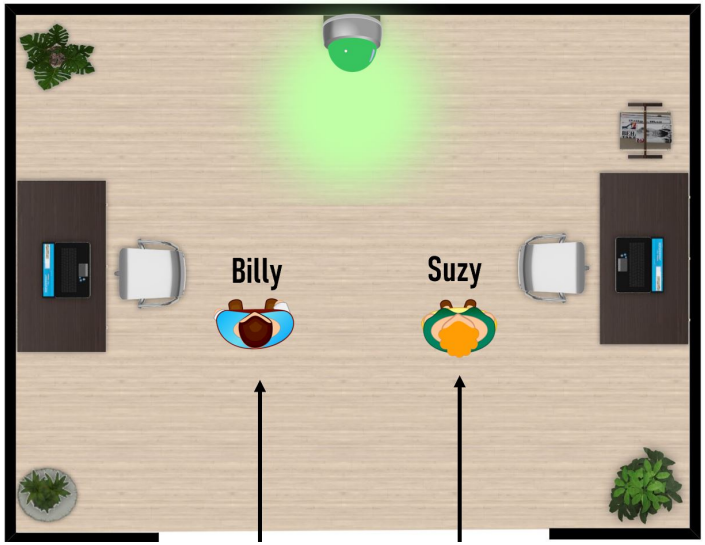
- The motion detector went off because **Billy** entered the office.
- The motion detector went off because **Suzy** entered the office.

Given Ben's decision, which of these two scenes did he see?

Definitely this one | Unsure | Definitely this one

Final_Billyselected_Billyabnormal_right

The following picture shows the scene of a morning in the office on which both Billy and Suzy arrived at the office at 9am and the motion detector went off. However, the scene does not show the instructions of the boss for that particular day, i.e. whether Billy was supposed to come in at 9am and Suzy was supposed to not arrive in the morning, or whether Suzy was supposed to come in at 9am that morning, and Billy was not supposed to arrive in the morning.



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Which of the following statements better describes what has happened in this situation?

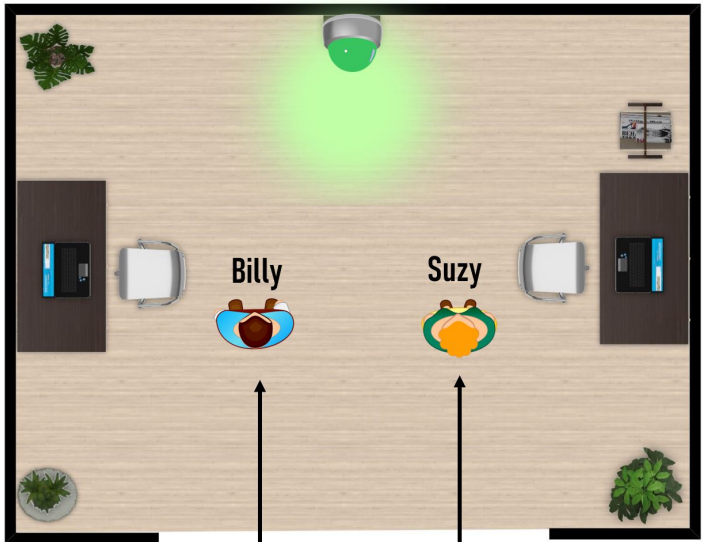
- The motion detector went off because **Billy** entered the office.
- The motion detector went off because **Suzy** entered the office.

Given Ben's decision, which of these two scenes did he see?

Definitely this one Unsure Definitely this one

Final_Suzyselected_Billyabnormal_left

The following picture shows the scene of a morning in the office on which both Billy and Suzy arrived at the office at 9am and the motion detector went off. However, the scene does not show the instructions of the boss for that particular day, i.e. whether Billy was supposed to come in at 9am and Suzy was supposed to not arrive in the morning, or whether Suzy was supposed to come in at 9am that morning, and Billy was not supposed to arrive in the morning.



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Which of the following statements better describes what has happened in this situation?

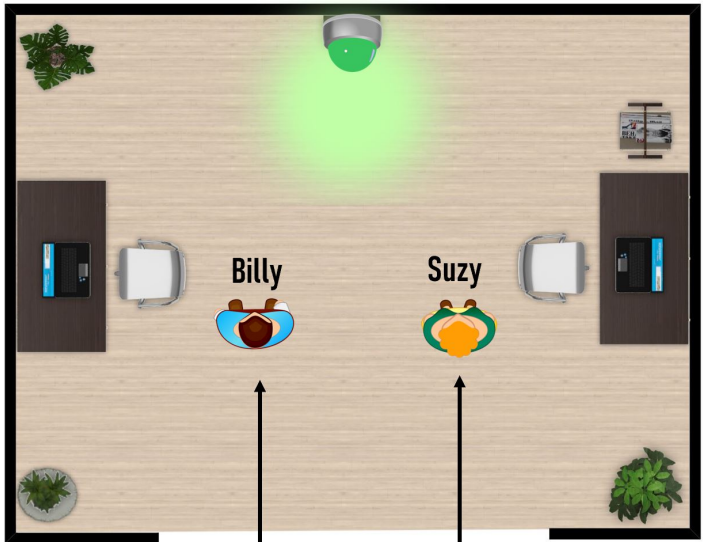
- ○ The motion detector went off because **Billy** entered the office.
- ● The motion detector went off because **Suzy** entered the office.

Given Ben's decision, which of these two scenes did he see?

Definitely this one Unsure Definitely this one

Final_Suzyselected_Billiyabnormal_right

The following picture shows the scene of a morning in the office on which both Billy and Suzy arrived at the office at 9am and the motion detector went off. However, the scene does not show the instructions of the boss for that particular day, i.e. whether Billy was supposed to come in at 9am and Suzy was supposed to not arrive in the morning, or whether Suzy was supposed to come in at 9am that morning, and Billy was not supposed to arrive in the morning.



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Which of the following statements better describes what has happened in this situation?

- ○ The motion detector went off because **Billy** entered the office.
- ● The motion detector went off because **Suzy** entered the office.

Given Ben's decision, which of these two scenes did he see?

Definitely this one | Unsure | Definitely this one

Test_Questions_Incorrect

One or more of your responses were incorrect. Please re-read the instructions and try again!

Introcheck_2

If *two employees* enter the office at the same time, the motion detector will go off.

- ○ true
- ○ false

If *only one employee* enter the office, the motion detector will go off.

- ○ true
- ○ false

What kind of instruction does the company's boss give to the two employees?

- ○ One employee must arrive at 9am in the office while the other employee must not enter the office in the morning.
- ○ One employee must log into the company chat at 9am while the other employee must not log into the company chat in the morning.

Are the instructions by the boss always the same for the two employees?

- ○ Yes, one employee is always prohibited from doing something, while the other employee is always supposed to do something.
- ○ No, who is supposed to do the respective action and who is prohibited from doing so can vary from day to day.

Test_incorrect_2

You have answered one or more questions wrong for the second time. The survey ends here, thank you very much for your participation.

Feedback, Demographics and Payment Code

Thank you for answering these questions.

What factors influenced your decision about which of the two scenes was more likely? Do you have any other comments about the experiment?

Please provide the following demographic information to complete the study.

1. My age is:

- ○ My age in years is
- ○ Prefer not to say.

2. Gender

- ○ Female
- ○ Male
- ○ Non-binary
- ○ Prefer not to say.

3. Race

- ○ I am

- ○ Prefer not to say.

Ethnicity

- ○ Hispanic
- ○ Non-Hispanic
- ○ Prefer not to say.

Thank you very much for participating in this experiment!

If you have any questions or comments, please contact Aaron Beller (abeller@stanford.edu).

In order to receive credit for taking our survey, you will need to paste the following validation code into the box on MTurk:

TY7PM

Press the button below to end the experiment.