

Application Form – 2021

HREAP File No:

Sona No:

HREC No:

- For a NEW project, submit this application plus any additional documents bundled as a single pdf to your lab or research group Compliance Checker. If you do not know who your Compliance Checker is, please ask your supervisor. (Word files, zip files, and multiple attachments will be returned.)
- You may not start data collection (e.g., advertising for your study and/or recruiting participants) until you receive an official approval letter from the Research Ethics & Compliance Support unit via email
- Instructions for completing this form and additional forms can be downloaded from: <http://www.psy.unsw.edu.au/research/research-resources>

Project Title:

Visual search and choice

Location of Study [e.g., Building and room number]: Click here to enter text.

Declaration of Investigators:

☒ I/we apply for approval to conduct the research. If approval is granted, it will be undertaken in accordance with the protocol described in this application and other relevant guidelines, regulations and laws.

☒ I/we have read and understood the applicable UNSW and School's Workplace Health and Safety policies, including Covid-Safe policies. We will undertake all appropriate training in Workplace Health and Safety as dictated by UNSW and School policy.

Students see: <http://www.psy.unsw.edu.au/current-students/health-safety-students>

Staff and others see: http://www.ohs.unsw.edu.au/ohs_training/index.html

Chief Investigator/Supervisor Mike Le Pelley

Signature*

Name/Title/Pos'n: Professor

Email Contact: [UNSW address required] m.lepelley@unsw.edu.au

Date: 25/10/22

Investigators (including students)

Name & Status**

UNSW email address

Signature*

Daniel Pearson (Post-doc)

d.pearson@unsw.edu.au


**Status = Academic Staff, Post-doc, PhD student, MPsych student, Honours student, Research Assistant

*** Written signatures are optional provided the email from the Chief Investigator contains the following declaration: "All investigators and I are aware of this project and understand our ethical duties."**

ETHICS APPROVAL: As of _____, the Human Research Ethics Advisory Panel C (Behavioral) has recommended to the DVC (Research) that this project, being of minimal ethical impact, should proceed. When granted, this is valid for five years from this date.

_____ Co-Convenors, HREA Panel C, K Martire/K Faasse

_____ Reviewing Member Panel C, _____

_____ Head of School, Simon Killcross

SONA Registration and Request for Allocation of Psychology 1 Participants

[1: **You must have an ACTIVE SONA-1 RESEARCHER ACCOUNT in order to submit this application.** If you need a researcher account, please email sona@psy.unsw.edu.au with the following information: 1. Indicate that you would like a researcher account, 2. Include your first and last name, 3. Include your preferred email address, and 4. CC your supervisor if you are a student.

You must receive an acknowledgement of this registration before submitting an application for *both* an allocation of Psychology 1 students *and* ethics clearance. **Your application may be delayed if you fail to register for SONA before submitting the application.**

Note that researcher account can be used across several projects – a new researcher account **not required for every project.**]

☒ **Tick this box to indicate that you ARE REGISTERED on the SONA system**

[2: For PREVIOUSLY APPROVED PROJECTS (i.e., you have an HREAP-C File Number), you may request additional Psychology 1 participants by completing the “Additional Participants Form” available at <http://www.psy.unsw.edu.au/research/research-resources>]

The privilege of using Psychology 1 students carries with it the following responsibilities:

1. **You must promptly allocate credits** to participants on SONA within 5 working days of a session, and no later than the Monday following the last week of the teaching term.
2. **You must debrief participants** with additional pedagogical information regarding your study in the following manner:
 - a. Please prepare answers to items listed under Item 6d.
 - b. When conducting **face-to-face** debriefings, provide an electronic display of the answers to each participant, ask for questions, and then ask the participant to indicating that they have received a satisfactory debriefing
 - c. When conducting **online** debriefings, provide an electronic version of the answers to the questions, provide a point of contact for any questions, and ask participants to tick a box indicating that they have received the debriefing content.
 - d. The consent forms and debriefing registers/responses should be retained by the researcher or academic supervisor.
3. All research participation, including all parts of multipart studies and debriefings, with students from first year psychology **must be completed by 12 midnight on the Friday of the last week of term.**
4. For every 10 sessions posted to SONA, 1 session **must be offered after 5pm.**

[Continue to NEXT PAGE for requesting and allocating Psychology 1 student participants]

Request for allocation of Psychology 1 Participants (cont.)

☒ Tick this box if *either/both* Part 1 or Part 2 of your study will be run online

Duration [in 15 min increments – minimum of 15 minutes; If **MORE** than 1 hour provide your **justification** in the box below]

PART 1	PART 2	Home- or Pre-Work
60 mins	Click here to enter text.	Click here to enter text.

Click here to enter text.

Requested Credit Per Participant [in 0.25 increments – minimum: 0.5 point for in-person, 0.25 for online; for multipart studies state credit per part, see also Home / Pre-Work Policy p.11 and the ‘Additional Points’ guide p.12]

PART 1	PART 2	Home- or Pre-Work
1	Click here to enter text.	

Requested Number of Participants [In total]: 100

Total Requested Hours [= *Credit Per Participant X Number of Participants*]: 100

If **Total Requested Hours** is **MORE** than **100 HOURS** provide justification below

NA

Preparation Instructions [Describe below; Optional; Indicate tasks participants will need to do or not do prior to arriving at the study]:

NA

Eligibility Criteria [Describe below; Optional; *Note* this is **NOT** based on pre-screening]

Normal colour vision.

☐ Tick this box if your study has Pre-Screening Criteria.

Brief Description of Study [Describe below; **Required**; Indicating the overall purposes and what the participants will be asked to do; **STRICTLY** no more than **245 characters** (including spaces and punctuation) If your study is a two- part study you **must** include this fact in the 245 characters. Student participants will view this information before signing up for the study. **Your application will be returned to you and may encounter a two-week delay if your description exceeds the 245-character limit**]

This study investigates visual attention and decision-making. Participants will complete (1) a visual search task, in which they search for target shapes, and (2) a decision-making task, where they choose between different shapes

Character Count [including spaces and punctuation]: 229

☒ Tick this box to **DECLARE** that your description contains **245 CHARACTERS** or fewer.

THE UNIVERSITY OF NEW SOUTH WALES

Human Research Ethics Advisory Panel (HREAP) C – APPLICATION FORM

IMPORTANT: Answer ALL questions, and attach documentation where required

1. Investigator's School/Unit/Centre: School of Psychology

Investigators	Family Name	First Name and Title	UNSW ZID	UNSW Email	Phone/Mobile	Status *
Chief Investigator/Supervisor	Le Pelley	Prof Mike	z3297817	m.lepelley@unsw.edu.au	02 9065 1458	Professor
Investigator	Pearson	Dr Daniel	Z3254862	d.pearson@unsw.edu.au	02 9065 1458	Post-doc
Investigator						
Investigator						
Investigator						

*Status = Academic Staff, Post-doc, PhD student, MPsych student, Honours student, Research Assistant

2. Project Title:

Visual search and choice

[In answering the following questions, please be guided by *both* the instructions accompanying each question and the NHMRC National Statement on Ethical Conduct in Human Research: [html version](#); [pdf version](#)]

3. Project Description: [Please provide a **description** of the project (**300 word max**) in the text box below. This description should briefly summarise the aims and general hypotheses. However, for reaching a judgment about the ethics of the project, **this description should focus on what *will happen to the participants*** (i.e., a summary of the procedure). Think about what the participant will be exposed to. Please **attach** a copy of **questionnaires/task instructions/examples** of other stimulus materials, where feasible].

Previous research (e.g., HREAP #3287, 3449) has shown that stimuli paired with rewards draw attention. Research has also shown that attended items are more likely to be chosen in decision-making tasks. In this project, we will investigate whether reward-related attentional biases influence decision-making. Participants will complete two tasks:

1. Search Task

Participants will engage in a visual search task with 6 shapes: five circles and one diamond. The participant's goal is to locate the diamond and make a keypress response according to the orientation of the lines that it contains. The search display will contain a coloured circle. The colour of this distractor (blue or orange) will signal the magnitude of points that are available for a correct response.

2. Choice Task

Participants will be shown three different circles containing lines of different orientations and thicknesses. Participants will make a keypress response to choose one of the shapes, and receive a point reward based on their choice. The magnitude of the reward depends on the thickness of the lines. The probability of receiving reward depends on the orientation of the lines (participants will be instructed about these relationships). On the majority of trials one of the shapes will be coloured (blue or orange), but colour will be irrelevant to the task. The key question is whether training a relationship between colour and reward in the Search Task will influence the choices that participants make in the Choice Task.

The Search Task and Choice Task will alternate throughout the experiment. At the end of the experiment, participants will be asked to report which colour went with each reward outcome during the Search Task, which line thickness was associated with higher reward during the Choice Task, and which line orientation was associated with the higher chance of receiving reward during the Choice Task.

Upon completion of the experiment, SONA participants who score in the top 25% will earn a \$15 voucher to their choice of grocery store (Coles/Woolworths). Prolific participants in the top 25% will earn a 3.50 GBP bonus.

4. Risks and Mitigation

- a. Is there a plausible risk greater than discomfort, either physical, psychological, social, cultural or financial to participants ? [See (<https://research.unsw.edu.au/more-low-risk-research>) DECEPTION should be addressed under Item 9] 4a. ☐YES ☒NO
- b. Are there plausible risks greater than discomfort to researchers? 4b. ☐YES ☒NO
- c. Have you read the guidelines for managing distressed participants? [See p.5 of Ethics Approval Applicant Instructions] 4c. ☒YES ☐NO

[If you answered **YES** to **any** of these questions (4a or b) please describe the plausible risks greater than discomfort and how you intend to manage them] Click to answer here if YES to 4a, b

- d. This project will comply with the Covid-Safe policy for **Human Testing (Physical Distancing Possible)** [See pp. 10-14 of Ethics Approval Applicant Instructions] 4d. ☐YES ☒N/A
- e. This project will comply with the Covid-Safe policy for **Human Testing (Physical Distancing Not Possible)** [See p.15-19 of Ethics Approval Applicant Instructions] 4e. ☐YES ☒N/A

5. Recruitment of Participants: [See National Statement: Sections 4, 5, 6, 7, 8 and 9.]

- a. Is there any possibility of coercion of participants to enroll in the study? 5a. ☐YES ☒NO
- b. Are participants in a dependent relationship with the Investigator (e.g., teacher-student)? 5b. ☐YES ☒NO
- c. Will participants be offered an inducement to encourage their involvement? 5c. ☒YES ☐NO

[If you answered **YES** to **any** of these questions (5a-c) please describe fully how participants are to be recruited and how other issues are to be resolved below. Please **attach** any **recruitment advertisements** and **posters**. The credit offered to Psychology 1 students is considered an inducement.]

We intend to use two avenues for recruitment. Some participants will be recruited via SONA-1 for course credit, which provides a degree of inducement. Other participants will be recruited via Prolific and will participate for payment of 7 GBP. We have provided separate PISCs for each recruitment stream.

Participants will also be informed that the top-scoring 25% of participants will be rewarded with a \$15

voucher for the grocery store of their choice (SONA-1 participants) or 3.50 GBP.

As this study focuses on attention to reward-related stimuli, the monetary reward is an important aspect of the task to motivate participants' behaviour. Monetary rewards have been used in similar studies from out lab looking at attention to reward (e.g., Le Pelley et al., 2015; Pearson et al., 2016; current HREAP-C approvals 3287, 3288, 3503). To ensure that this performance-dependent reward does not constitute an additional inducement to sign up for the study, it will not be mentioned in the project description on SONA, but will be mentioned on the consent form and in subsequent instructions.

d. Will you be using Psychology 1 participants?

5d. ☒ YES ☐ NO

[If you answered **YES** provide responses to the debriefing questions listed below in the text box. Participants must confirm that they have been debriefed by signature (in-person) or a check-box response (online). This information should be discussed with participants during a 5-10 minute **mandatory** debriefing at the end of each session.

1. What are the research questions?
2. How does this study extend previous research on this topic?
3. What are some potential real-world implications of this research?
4. Briefly describe a potential issue (e.g., ethical, practical) or limitation of the study (e.g., design, ecological validity).
5. Briefly describe the study methodology (e.g., design, dependent/ independent variables, materials).
6. Further reading (i.e., a reference to a reading/s related to the current study for curious students).

1. What are the research questions?

The experiment investigates how likely we are to be distracted by distinctive stimuli, and how this influences the choices that we make. We know that stimuli signalling the opportunity for reward become more likely to capture our attention, in a way that is very hard for us to overcome. In the current experiment we are investigating how this attentional bias to reward influences the choices that we make

2. How does this study extend previous research on this topic?

Previous research has shown that reward signalling stimuli become more likely to capture people's attention (Le Pelley et al., 2015), and that stimuli that people intentionally pay attention to are more likely to be chosen (Shimojo et al., 2003). This study extends on previous research by examining whether the attentional bias to reward influences the decision-making process.

3. What are some potential real-world implications of this research?

We live our lives surrounded by signals for reward: signs directing us to tasty food and drink, adverts for desirable products, social media notifications on our phones, etc. The findings from this study will help deepen our understanding of how our cognition works. That is, how people gather and process information in their environment that they use to make decisions about how to behave.

4. Briefly describe a potential issue (e.g., ethical, practical) or limitation of the study (e.g., design, ecological validity).

One potential ethical issue is that monetary reward might further incentivize people to sign up to the study. To ensure that this performance-dependent reward does not constitute an additional inducement to sign up for the study, it will not be mentioned in the project description on SONA and will only be mentioned on the consent form and in subsequent instructions.

5. Briefly describe the study methodology (e.g., design, dependent/ independent variables, materials). The study uses a within-subjects design. The key independent variable is the colour of the distractor in the search/choice display. The main dependent variables are (1) time to locate and respond to the target in the Search Task, and (2) the proportion of choice trials on which the coloured circle is chosen.

6. Further reading (i.e., a reference to a reading/s related to the current study for curious students). Pearson, D., Watson, P., Albertella, L., & Le Pelley, M. E. (2022). Attentional economics links value-modulated attentional capture and decision-making. *Nature Reviews Psychology*, 1–14. <https://doi.org/10.1038/s44159-022-00053-z>

e. Will you be using participants who are **NOT** Psychology 1 students? 5d. ☒ **YES** ☐ **NO**

[If you answered **YES** provide a **description** of how those participants will be recruited for your project. Among other things, please indicate the targeted sample size, places where you will recruit, rate of any reimbursement, your recruiting advertisements, any personal approaches, and special characteristics of the target population. **Recruiting advertisements** should be attached]

Depending on availability of SONA-1 students, we may also recruit participants from Prolific to ensure sufficient sample size (target is 100 participants in total). These participants will receive payment of 7 GBP and participants who score in the top 25% will receive a bonus of 3.50 GBP. The recruiting advertisement will state:

"In this study, you will complete two tasks. First, you will be required to search for and respond to shapes as quickly and accurately as possible in order to earn points. In the second task, you will be required to choose between different shapes to earn points. If you score in the top 25% of all participants, you will receive a bonus of 3.50 GBP. You will be required to complete a large number of trials. The task will take around 60 minutes and you should complete it in a single session".

6.  **Informed Consent and Debriefing:** [See National Statement: Sections 1, 6, 14, 15 and 16]

a. Will you seek informed consent from participants, either in writing or electronically, e.g. 'button' push?" 6a. ☒ **YES** ☐ **NO**

[If you answered **NO**, please justify why not. If you answered **YES** attach Participant Information Sheet(s) and **Consent Form(s)** prepared in *close accordance* with the **HREC proforma**.]

Click to answer here if NO for 6a

b. Will you be providing a debriefing? 6b. ☒ **YES** ☐ **NO**

[If you answered **NO**, please justify why not **below**. If you answered **YES** please **describe** the debriefing **below**. Note: Debriefing is MANDATORY whenever Psychology 1 students (see Item 6d) and/or deception (see Item 10) are used.]

The on-screen debriefing at the end of the experiment will state:

“In this study, we are investigating the factors that influence when people will be distracted, and how that influences the choices that we make. You may have found that sometimes, while you were searching for the diamond, you were distracted by the coloured shape presented I the display. In particular, we are interested in the effect of rewards on distraction: are people more likely to be distracted by a colour that signals relatively large rewards, or can people learn to prevent themselves from being distractor (and hence respond more quickly) when a large reward is at stake?

We are also interested in the effects of distraction on the choices that we make. If you are more likely to be distracted by the colour that signals relatively large rewards, does that change the way you make decisions in the choice task?

The experiment is now complete – thanks for taking part! We realise that this is a long and somewhat taxing task, and we appreciate your participation”

SONA-1 participants will also receive answers to the standard debriefing questions (via email).

7. Privacy, Confidentiality, Anonymity: [See National Statement: Section 17]

- a. Is there a requirement for the researchers to identify, collect, use, or disclose information of a personal nature (either identifiable or potentially identifiable) about individuals without their consent? 7a. ☐YES ☒NO

[This question primarily concerns situations covered by the *Privacy Act*, in which you are collecting information from databases kept by third parties such as government departments or human resource departments in a business. If you do wish to obtain data about identifiable individuals from such data bases, please complete the **HREA Panel Privacy Form**.]

- b. Is there a possibility of participants being inappropriately identified or confidential data being divulged during or after the research has taken place? 7b. ☐YES ☒NO

[If you answered **YES** please **describe** the measures you will take **below** to ensure privacy, confidentiality and anonymity are preserved. One favoured measure is to irretrievably strip the names and other identifying information from the data records.]

Click to answer here if YES for 7b

- c. Please complete the table below regarding storage of research data and materials. Please ensure this is compliant with the [UNSW Handling Research Material & Data Procedure](#)

Data Type	Campus/Location	Building/Server Name	How is data stored securely	How is access restricted	Estimated date of data destruction (NB* Data must be stored for a minimum period of 5 years after publication)
<input type="checkbox"/> Hard Copies (add additional rows for multiple locations)					
<input checked="" type="checkbox"/> Electronic Copies (add additional rows for multiple locations)	Kensington Campus	Matthews Building, O: drive	Data will be stored securely in a controlled-access folder on the O: drive	Only investigators will have access to the data folder	2032
<input type="checkbox"/> Audio/Visual (add additional rows for multiple locations)					

8. Observation and Records:

- a. Is it necessary in your research to make recorded observations of participants? [e.g., audiotapes, videotapes] 8a. ☐ YES ☒ NO
- b. Is it necessary to use records or database information? 8b. ☐ YES ☒ NO

[If you answered **YES** to either question, please **explain below** why and how this will be done].

Click to answer here if YES for 8a or b

9. Deception/Limited Disclosure/Debriefing: In your research, is it necessary to:

- a. deceive the participants? 9a. ☐ YES ☒ NO
- b. disclose limited information to participants? 9b. ☐ YES ☒ NO

[See **National Statement**: 'Deception' is defined where relevant material is withheld from research participants and/or they are intentionally misled about procedures and/or purposes of the research. Please note that if the research involves deception, the project must be reviewed by the Human Research Ethics Committee as per section 2.3.4 of the National Statement

'Limited Disclosure' refers to not disclosing to research participants all of the aims and/or methods of the research.

if YES for 9a or 9b, please explain what the deception or limited disclosure will entail.

10. Funding and Conflicts of Interest:

- a. Is the research being funded by an agency outside the University of New South Wales? 10a. ☐ YES ☒ NO
- b. Is there any conflict of interest (including financial gain) likely to result from this project? 10b. ☐ YES ☒ NO

[If you answered **YES** to either of these questions, please provide **details** below and **attach** documentation. Note: **Externally-funded projects that are of minimal ethical impact can be approved by the HREAP**].

Click to answer here if YES for 10a or 10b

11. **Organisations other than the University of New South Wales:**

- a. Are there organisations other than UNSW or another collaborating university involved in this research? 11a. ☐ YES ☒ NO

[If you answered **YES**, please provide **details** below. Please **attach** a **letter of support** for the research from the organization. Provisional approval can be given pending receipt of a letter of support.]


Click to answer here if YES for 11a

12. **Publications and Disseminations of results:**

Please detail how the research results will be reported/published and how the results will be reported back to the participants of the study.

Research results will be written up for publication in academic journals and reported in conference presentations as appropriate. Participants will be told that: "The research team intend to publish and report the results of the research study in a variety of ways. Any publication of information will be done in a way that will not identify you. If you would like to receive a copy of the results you can let the research team know by emailing Prof Mike Le Pelley: m.lepelley@unsw.edu.au"..

13. Participant Information Statement and Consent Form (PISCF): The next pages (9-11) show the template of the PISCF that is suitable for the vast majority of projects. However, should you wish to conduct phone interviews where the participant provides verbal consent, please see <https://research.unsw.edu.au/forms-and-templates> for a script that is complies with NHMRC ethics requirements. There are also PISCFs for parents/guardians and for participants who may need an easy-to read format.

School of Psychology	
PARTICIPANT INFORMATION STATEMENT AND CONSENT FORM SONA-1 Participants Visual Search and choice	

1. What is the research study about?

You are invited to take part in this research study. The research study aims to investigate the role of attention in decision-making, by asking you to (1) search for shapes as quickly and accurately as possible, and (2) choose between different shapes. You have been invited because you registered to participate in this study via SONA, and your contact details were obtained from SONA.

2. Who is conducting this research?

The study is being carried out by the following researchers: Professor Mike Le Pelley and Dr Daniel Pearson, School of Psychology, UNSW Sydney.

Research Funder: This research is being funded by the Australian Research Council.

3. Inclusion/Exclusion Criteria

Before you decide to participate in this research study, you should meet the following criteria:

- Normal colour vision

4. Do I have to take part in this research study?

Participation in this research study is voluntary. If you do not want to take part, you do not have to. If you decide to take part and later change your mind, you are free to withdraw from the study at any stage (See Item 11).

5. What does participation in this research require, and are there any risks involved?

If you decide to take part in the research study, we will ask you to complete a search task, in which you will be asked to search for and respond to shapes. You will be able to earn points for making correct responses. Then, you will complete a choice task in which we will ask you to choose between different shapes in order to earn points.

We don't expect this research to cause any harm. However, you may skip any or all written or verbal questions if you wish. Please let the researchers know if you need any assistance for any reason.

6. Total participation time

In total, participation in this study will require 1 hour.

7. Recompense to participants

You will receive 1 SONA credit as recompense for your participation. In addition, you will be able to earn points during the study, and the 25% of participants who earn the most points will receive a \$15 gift voucher to the grocery store of their choice (Coles/Woolworths).

8. What are the possible benefits to participation?

We cannot promise that you will receive any benefits from this study, but we hope to use the findings from this study to better understand the relationship between attention and decision-making.

9. What will happen to information about me?

The information that you give us will be kept for 10 years after the project's completion. We will store information about you in a non-identifiable format at UNSW (Kensington Campus).

Researchers at UNSW are requested to store their aggregated research data in the UNSW data repository, this is a system called ResData. Once the aggregated data are deposited into this repository, they will be retained in this system permanently, but in a format where your data will not be individually identifiable.

Your information will only be used in publications and reports based on this research study. Information collected for this research project may be made available to other research projects in de-identified form only.

10. How and when will I find out what the results of the research study are?

The research team intend to publish and/ report the results of the research study in a variety of ways. All information published will be done in a way that will not identify you. If you would like to receive a copy of the results you can let the research team know by emailing Prof Mike Le Pelley: m.lepelley@unsw.edu.au. We will only use these details to send you the results of the research.

11. What if I want to withdraw from the research study?

If you do consent to participate, you may withdraw at any time. You do not have to give any reason for withdrawing. However, please let the researcher know by email.

Your decision not to participate or to withdraw from the study will not affect your relationship with UNSW Sydney. If you decide to withdraw from the research study, the researchers will not collect additional information from you. Any identifiable information about you will be withdrawn from the research project.

12. What should I do if I have further questions about my involvement in the research study?

If you require further information regarding this study or if you have any problems that may be related to your involvement in the study, you can contact the following member/s of the research team:

Research Team Contact Details

Chief Investigator	Prof Mike Le Pelley
Position	Professor
Telephone	+61 2 9065 1458
Email	m.lepelley@unsw.edu.au

Chief Investigator	Dr Daniel Pearson
Position	Research Associate
Email	m.lepelley@unsw.edu.au

What if I have a complaint or any concerns about the research study?

If you have a complaint regarding any aspect of the study or the way it is being conducted, please contact the UNSW Human Ethics Coordinator:

Complaints Contact

Position	UNSW Human Research Ethics Coordinator
Telephone	+ 61 2 9385 6222
Email	humanethics@unsw.edu.au
HC Reference Number	<i>[INSERT HC reference number] or HREAP-C File Number, as relevant.</i>

School of Psychology



PARTICIPANT INFORMATION STATEMENT AND CONSENT FORM

Prolific Participants
Visual search and choice

13. What is the research study about?

You are invited to take part in this research study. The research study aims to investigate the role of attention in decision-making, by asking you to (1) search for shapes as quickly and accurately as possible, and (2) choose between different shapes. You have been invited because you registered to participate in this study via Prolific, and your contact details were obtained from Prolific.

14. Who is conducting this research?

The study is being carried out by the following researchers: Professor Mike Le Pelley and Dr Daniel Pearson, School of Psychology, UNSW Sydney.

Research Funder: This research is being funded by the Australian Research Council.

15. Inclusion/Exclusion Criteria

Before you decide to participate in this research study, you should meet the following criteria:

- Normal colour vision

16. Do I have to take part in this research study?

Participation in this research study is voluntary. If you do not want to take part, you do not have to. If you decide to take part and later change your mind, you are free to withdraw from the study at any stage (See Item 11).

17. What does participation in this research require, and are there any risks involved?

If you decide to take part in the research study, we will ask you to complete a search task, in which you will be asked to search for and respond to shapes. You will be able to earn points for making correct responses. Then, you will complete a choice task in which we will ask you to choose between different shapes in order to earn points.

We don't expect this research to cause any harm. However, you may skip any or all written or verbal questions if you wish. Please let the researchers know if you need any assistance for any reason.

18. Total participation time

In total, participation in this study will require 1 hour.

19. Recompense to participants

You will receive 7 GBP as recompense for your participation. In addition, you will be able to earn points during the study, and the 25% of participants who earn the most points will receive a bonus of 3.50 GBP.

20. What are the possible benefits to participation?

We cannot promise that you will receive any benefits from this study, but we hope to use the findings from this study to better understand the relationship between attention and decision-making.

21. What will happen to information about me?

The information that you give us will be kept for 10 years after the project's completion. We will store information about you in a non-identifiable format at UNSW (Kensington Campus).

Researchers at UNSW are requested to store their aggregated research data in the UNSW data repository, this is a system called ResData. Once the aggregated data are deposited into this

repository, they will be retained in this system permanently, but in a format where your data will not be individually identifiable.

Your information will only be used in publications and reports based on this research study. Information collected for this research project may be made available to other research projects in de-identified form only.

22. How and when will I find out what the results of the research study are?

The research team intend to publish and/ report the results of the research study in a variety of ways. All information published will be done in a way that will not identify you. If you would like to receive a copy of the results you can let the research team know by emailing Prof Mike Le Pelley: m.lepelley@unsw.edu.au. We will only use these details to send you the results of the research.

23. What if I want to withdraw from the research study?

If you do consent to participate, you may withdraw at any time. You do not have to give any reason for withdrawing. However, please let the researcher know by email.

Your decision not to participate or to withdraw from the study will not affect your relationship with UNSW Sydney. If you decide to withdraw from the research study, the researchers will not collect additional information from you. Any identifiable information about you will be withdrawn from the research project.

24. What should I do if I have further questions about my involvement in the research study?

If you require further information regarding this study or if you have any problems that may be related to your involvement in the study, you can contact the following member/s of the research team:

Research Team Contact Details

Chief Investigator	Prof Mike Le Pelley
Position	Professor
Telephone	+61 2 9065 1458
Email	m.lepelley@unsw.edu.au

Chief Investigator	Dr Daniel Pearson
Position	Research Associate
Email	m.lepelley@unsw.edu.au

What if I have a complaint or any concerns about the research study?

If you have a complaint regarding any aspect of the study or the way it is being conducted, please contact the UNSW Human Ethics Coordinator:

Complaints Contact

Position	UNSW Human Research Ethics Coordinator
Telephone	+ 61 2 9385 6222
Email	humanethics@unsw.edu.au
HC Reference Number	<i>[INSERT HC reference number] or HREAP-C File Number, as relevant.</i>

Consent Form – Participant providing own consent

Declaration by the participant

- ☐ I understand I am being asked to provide consent to participate in this research study;
- ☐ I have read the Participant Information Sheet or someone has read it to me in a language that I understand;
- ☐ I understand the purposes, study tasks and risks of the research described in the study;
- ☐ I provide my consent for the information collected about me to be used for the purpose of this research study only.
- ☐ I have been given contact details of the researchers to enable me to ask questions about my participation.
- ☐ I freely agree to participate in this research study as described and understand that I am free to withdraw at any time during the study and withdrawal will not affect my relationship with any of the named organisations and/or research team members;
- ☐ I would like to receive a copy of the study results via email or post, I have provided my details below and ask that they be used for this purpose only;

Name: _____

Address: _____

Email Address: _____

I consent to participate in this research.

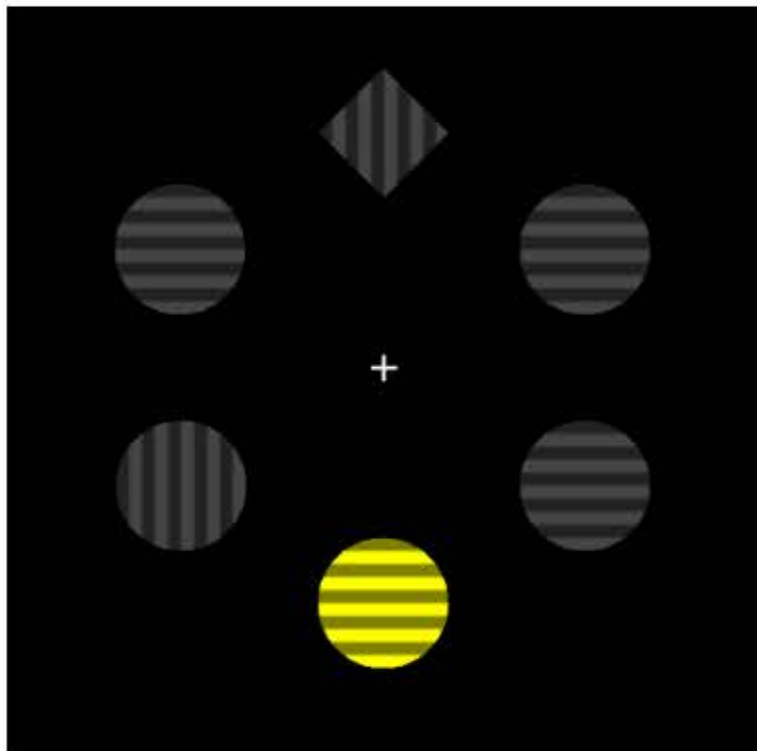
☐ YES ☐ NO

Appendix:

Instructions

Thanks for agreeing to take part in this study, in which you will be asked to complete a **search task**.

Each trial will start with a cross appearing – this tells you that the search task is about to begin. A set of shapes will then appear. One of these shapes will be a diamond and the rest will be circles. This diamond is called the **target**. An example is shown below:



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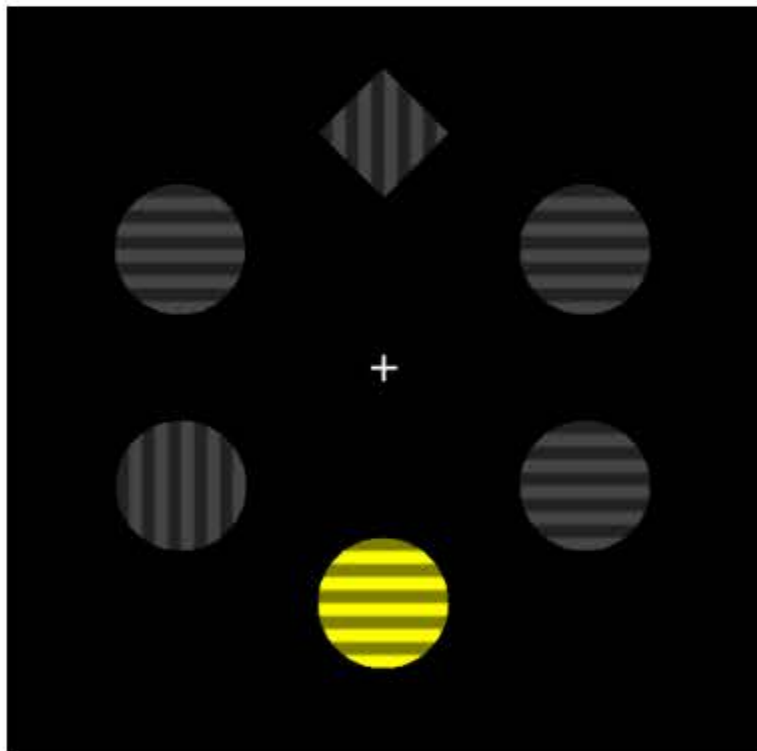
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Each of the shapes will contain lines, and your task is to respond to the lines that are contained in the target (i.e., the diamond).

If the lines inside the target are HORIZONTAL, you should press the C key.

If the lines are VERTICAL, you should press the M key.

You should respond as quickly as you can, but try to avoid making errors.

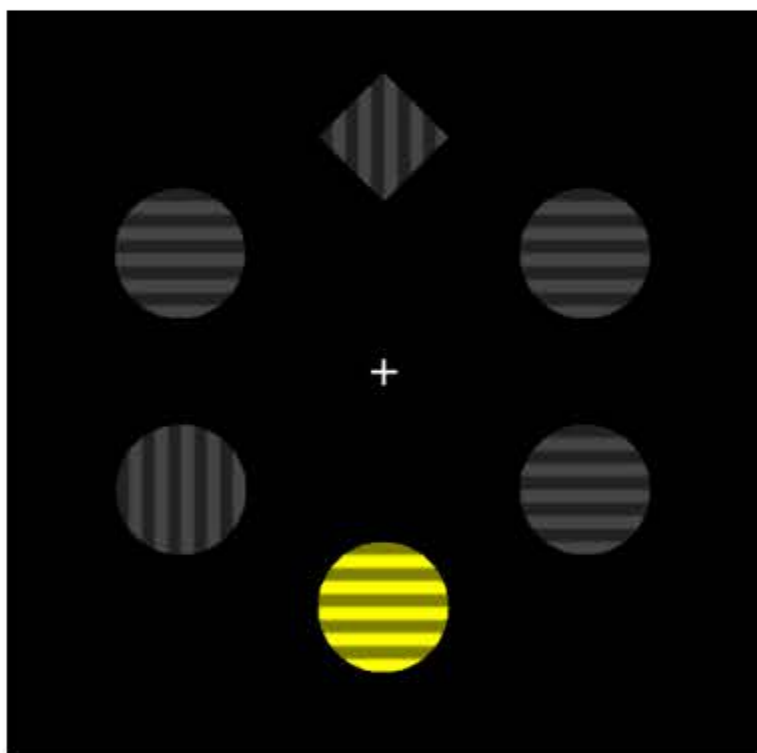


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On most of the trials, one of the circles in the display will be coloured.

Note, however, that **the target diamond will never be coloured. So the best strategy in this task is to ignore coloured shapes altogether, and respond to the target as quickly as possible.**



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The rest of this task is similar to the trials you have just completed. On each trial, you should respond to the lines contained inside the diamond.

If the lines are HORIZONTAL, you should press the C key.

If the lines are VERTICAL, you should press the M key.

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From now on, you will be able to earn points for correct responses. For every 4,630 points you gain, you will unlock a medal.

Only around 10% of participants will unlock the ELITE medal - can you?



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Your aim should be to win as many points as possible. Not only do points unlock medals, but (perhaps more importantly) **the 25% of participants who earn the most points will each win a \$15 Coles/Woolworths Voucher.**

So if you are among the top-scoring 25% of participants, you will win a prize!

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The faster you make a correct response on each trial, the more points you will earn. But if you make an error, you will LOSE the corresponding amount. So you should try to respond as quickly and accurately as possible.

IMPORTANT: Some of the trials will be BONUS trials! The number of points available on bonus trials is much higher than on standard (non-bonus) trials.

So you will earn much more for correct responses on bonus trials than on standard trials.

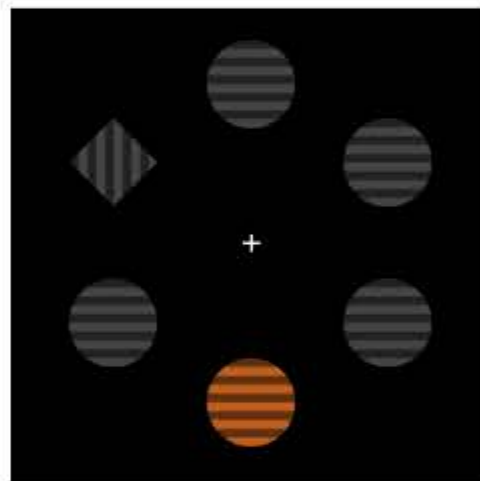
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On some of the trials, one of the circles in the display will be coloured.

If an orange circle is in the display, the trial WILL be a BONUS trial.

If a blue circle is in the display, the trial WILL NOT be a bonus trial.



BONUS!



No bonus

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Note, however, that you should always respond to the DIAMOND.

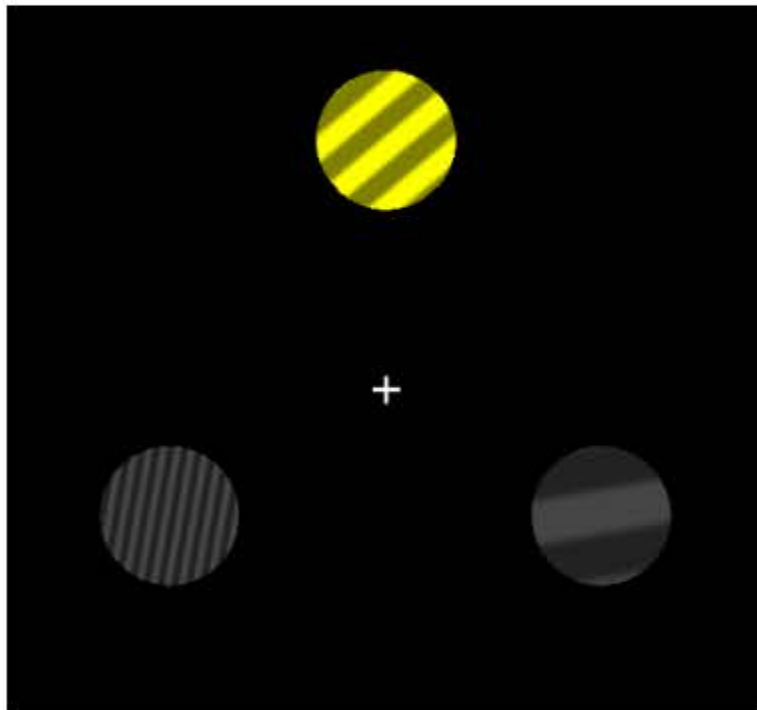
The diamond will never be coloured. So the best strategy in this task (that will earn the most points) is to ignore the coloured shapes altogether, and respond to the diamond as quickly as possible.

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In the next part of the experiment, you will complete a **choice task**.

On each trial, you will see three circles appear. An example is shown below. You will be asked to **choose one of these circles in order to earn points**.



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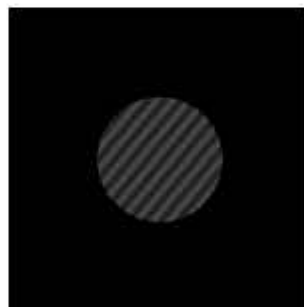
The number of points that you could win, and your chances of winning those points, depends on the circle that you choose.

The number of points that you could win is determined by the **thickness of the lines** inside the circle.

If the lines inside the circle are **thick**, choosing that circle could win you **more points**

If the lines inside the circle are **thin**, choosing that circle could win you **fewer points**

The picture below shows some examples of thicknesses you will see in the task, and the points they correspond to:



10 points



150 points



360 points

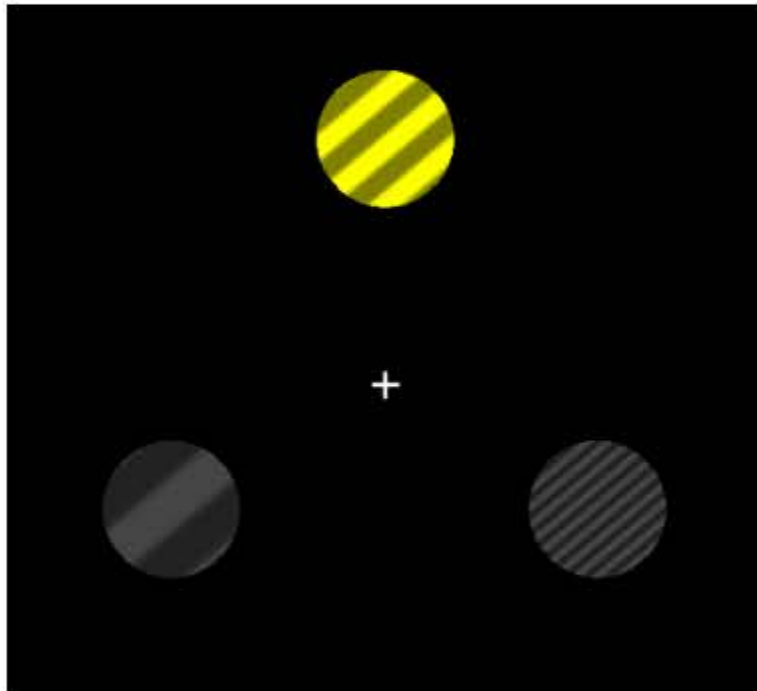


500 points

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For example, in the picture below, picking the **left** circle could win the **most points**, picking the **right** circle could win the **least points**, and picking the **top** circle could win a **medium number of points**.



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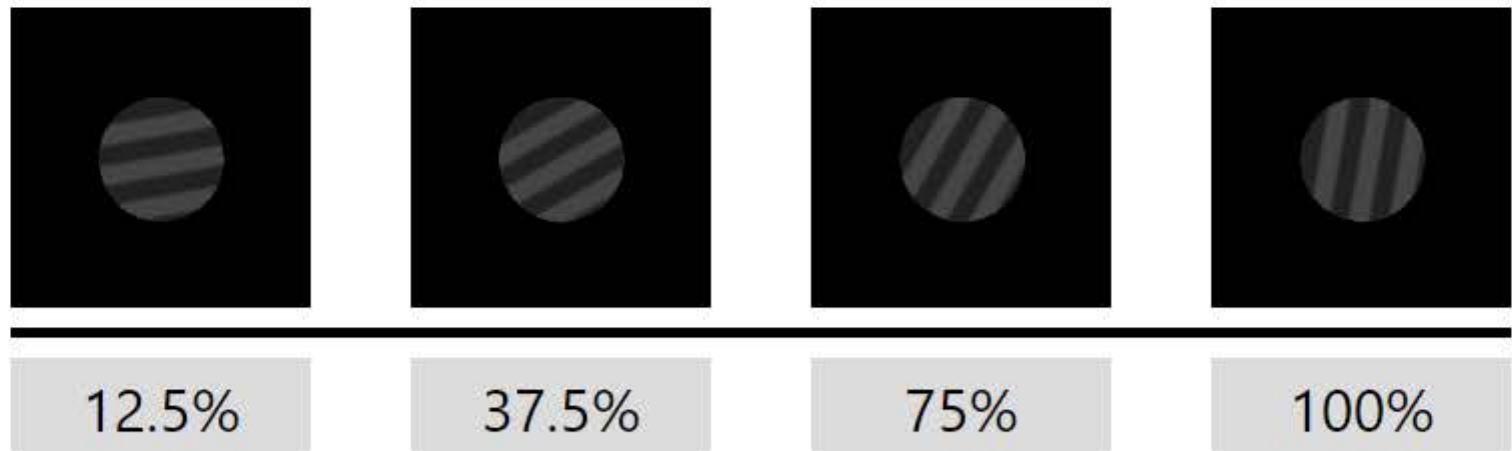
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However, you will not always win the points associated with your chosen circle. The chance of winning the reward is determined by the **orientation of the lines** inside the circle.

The closer the lines are to **vertical**, the **higher the chance** that you will win points if you choose that circle.

The closer the lines are to **horizontal**, the **lower the chance** that you will win points if you choose that circle.

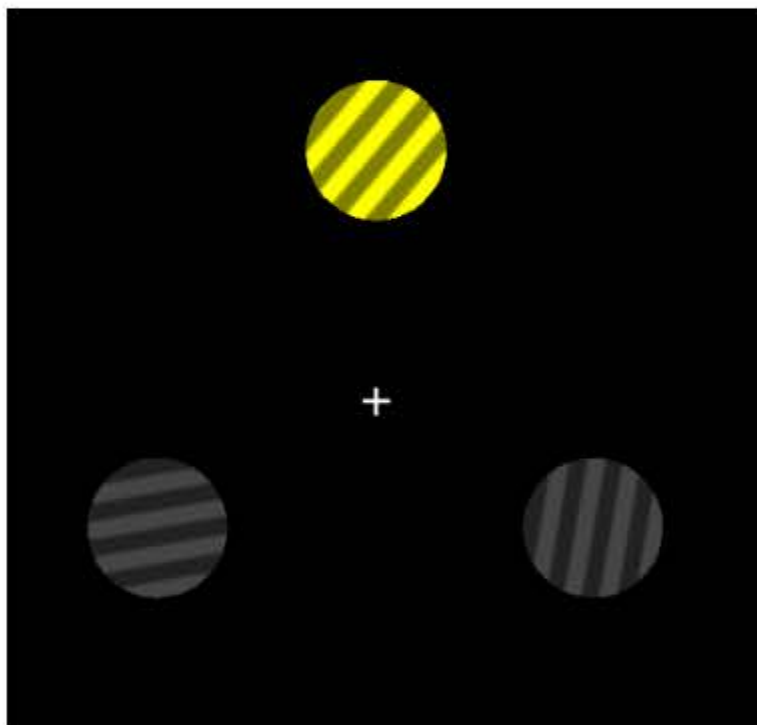
The picture below shows some examples of orientations you will see in the task, and the percent chance of winning that they correspond to:



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For example, in the picture below, picking the **right** circle would give you the **highest chance of winning**, picking the **left** circle would give you the **lowest chance of winning**, and picking the **top** circle would give you a **medium chance of winning**.

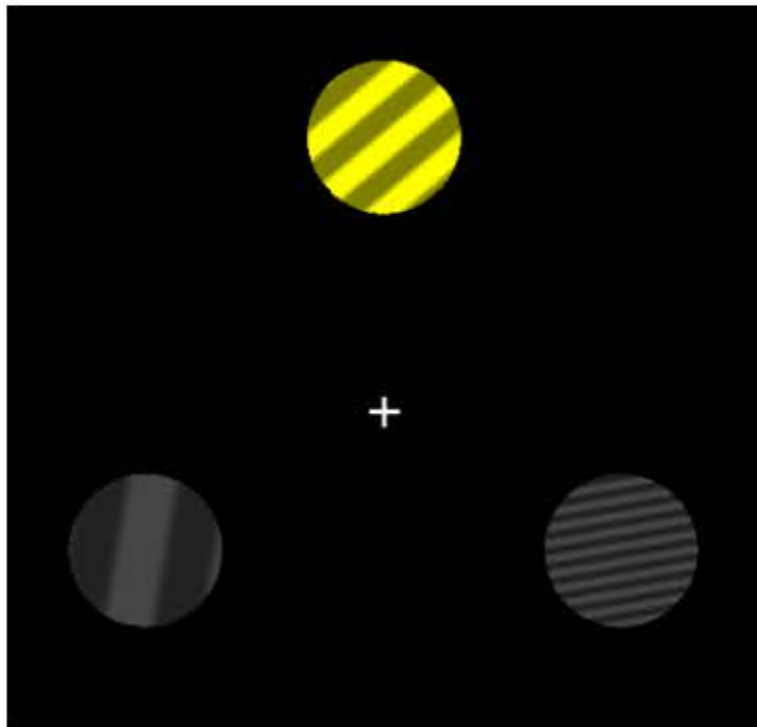


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In the task, each circle's lines will have a different thickness AND a different orientation. You should take both into account when making your choice.

For example, in the picture below, picking the **left** circle would give you a **high chance** of winning a **large reward**. Picking the **top** circle would give you a **medium chance** of winning, a **medium reward**. Picking the **right** circle would give you a **low chance** of winning, a **low reward**.



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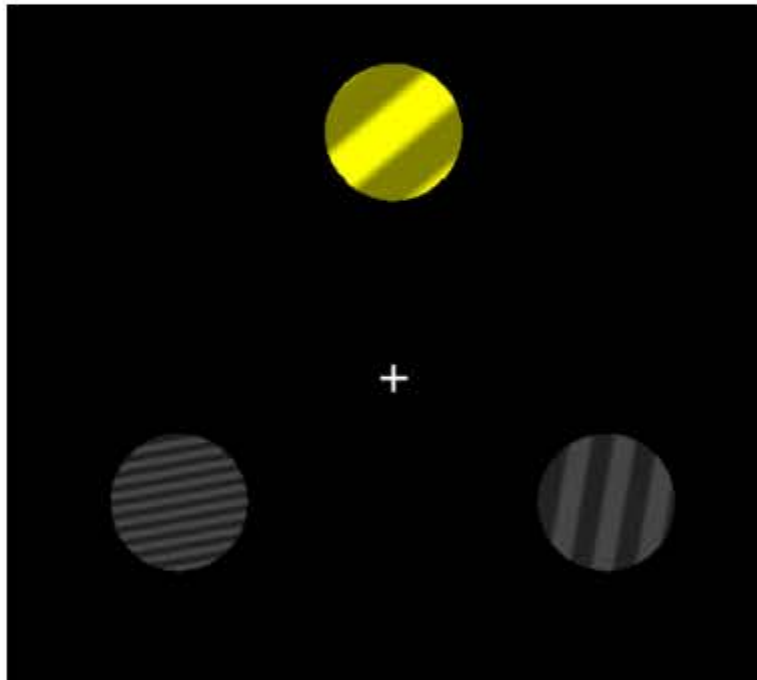
In this picture, picking the **left** circle would give you a **high chance** of winning a **small reward**. Picking the **top** circle would give you a **medium chance** of winning, a **medium reward**. Picking the **right** circle would give you a **low chance** of winning, a **large reward**.



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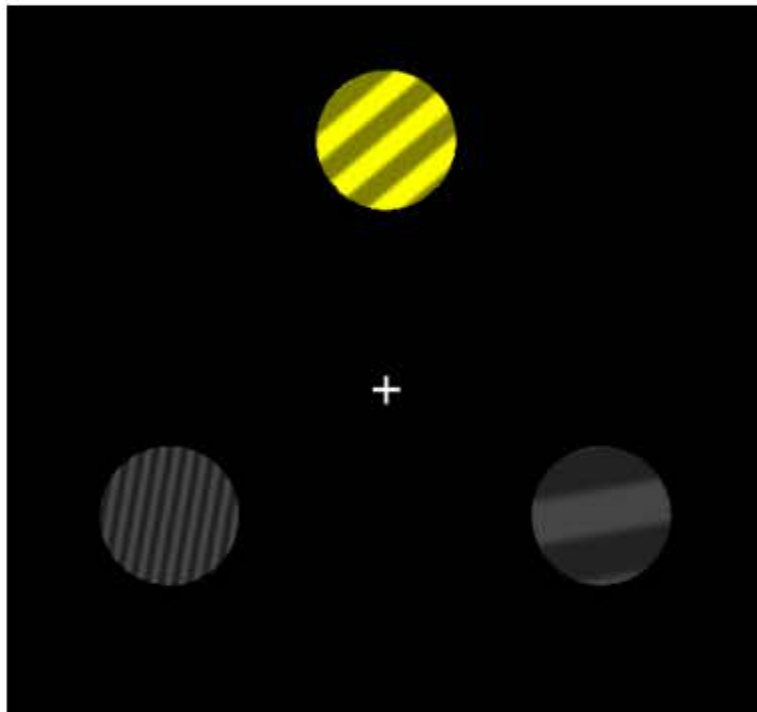
And in this picture, picking the **right** circle would give you a **high chance** of winning a **medium reward**. Picking the **top** circle would give you a **medium chance** of winning, a **large reward**. Picking the **left** circle would give you a **low chance** of winning, a **small reward**.



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One of the circles will be coloured on each trial. However, **colour does not mean anything** in this part of the experiment, so you should ignore the colour, and make your decision based on the lines inside the circles.

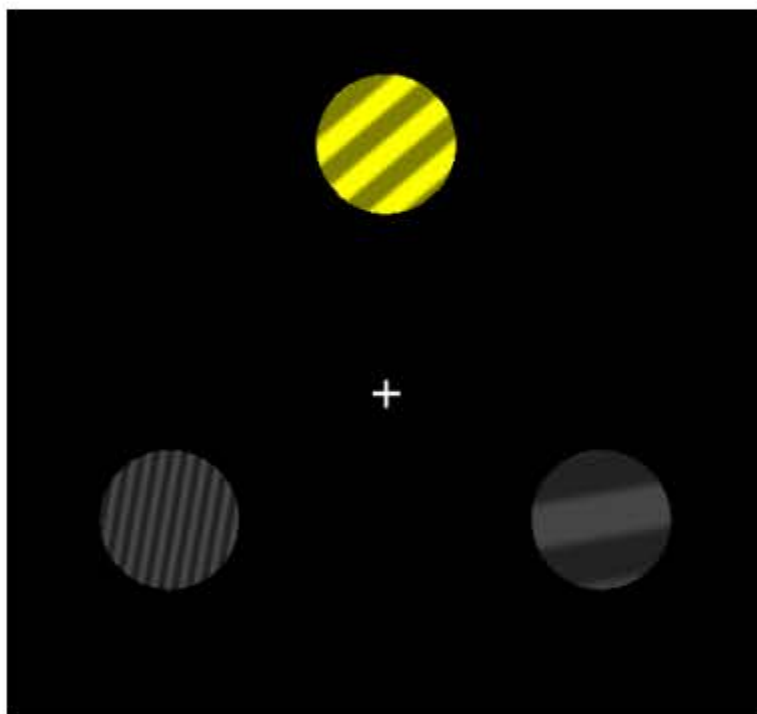


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On each trial you will make your choice using the arrow keys on your keyboard.

To pick the left circle, press the LEFT ARROW KEY. To pick the top circle, press the UP ARROW KEY.
To pick the right circle, press the RIGHT ARROW KEY.



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After you make your choice, you will be shown how many points you have earned. These points will add to your total number that you have collected so far and count towards your chance of winning a a \$15 Coles/Woolworths Voucher.

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You will only have 1500 ms to make your choice. If you do not make a choice within that time, then you will earn nothing for that trial. So make sure to choose quickly!

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During the SEARCH TASK, the number of points that you could win on each trial was determined by the colour of the coloured circle in the display. When certain colours appeared, you could potentially win more points than when other colours appeared.

In the next phase we will test what you have learned about the different colours of circles.

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You will be shown two coloured circles, and will be asked to choose which one meant that the trial was a BONUS trial. If you are correct, we will add 1000 points to your total.

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During the CHOICE TASK, the number of points that you could win was determined by the thickness of the lines inside the circle that you chose.

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In the next phase, you will be shown pictures of two different circles and will be asked to choose which one you think would earn more points in the choice task.

If you are correct, we will add 1000 points to your total.

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During the CHOICE TASK, your chance of winning points was determined by the orientation of the lines inside the circle that you chose.

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In the next phase, you will be shown pictures of two different circles and will be asked to choose which one you think would give you the higher chance of winning points in the choice task.

If you are correct, we will add 1000 points to your total.

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Search task
example 1



+



Search Task
example 2



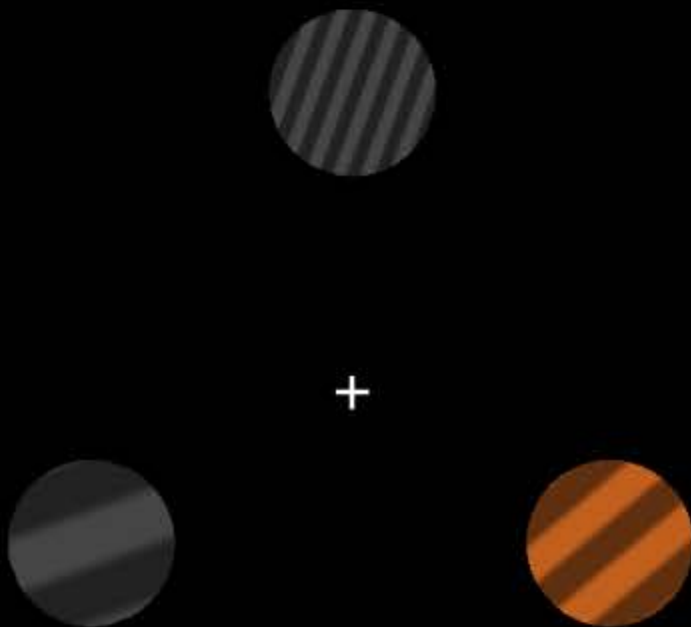
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Choice Task Example 1



Choice task example 2



Feedback screen

+150 points

Total: 1,653

Final test question 1

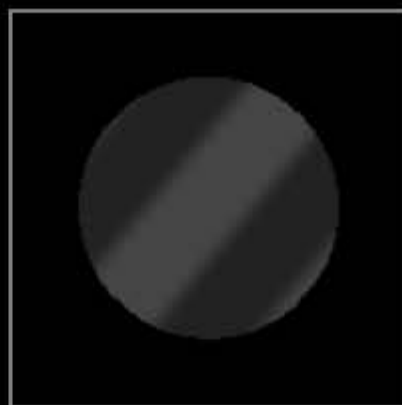
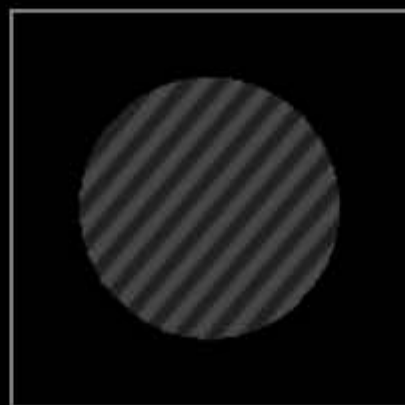
Please select the circle that you think would be in the search display on a BONUS trial in the search task.



Please click on the display that you would like to select

Final test question 2

Please select the circle that you think would win you more points in the choice task.



Please click on the circle that you would like to select

Final test question 3

Please select the circle that you think would have a higher chance of winning points in the choice task.



Please click on the circle that you would like to select