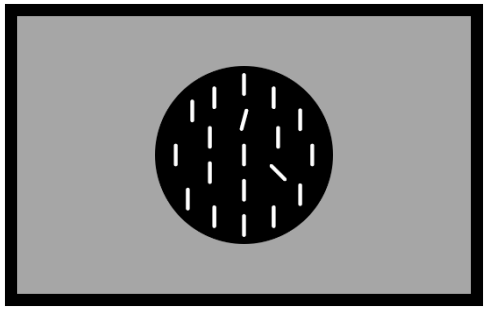
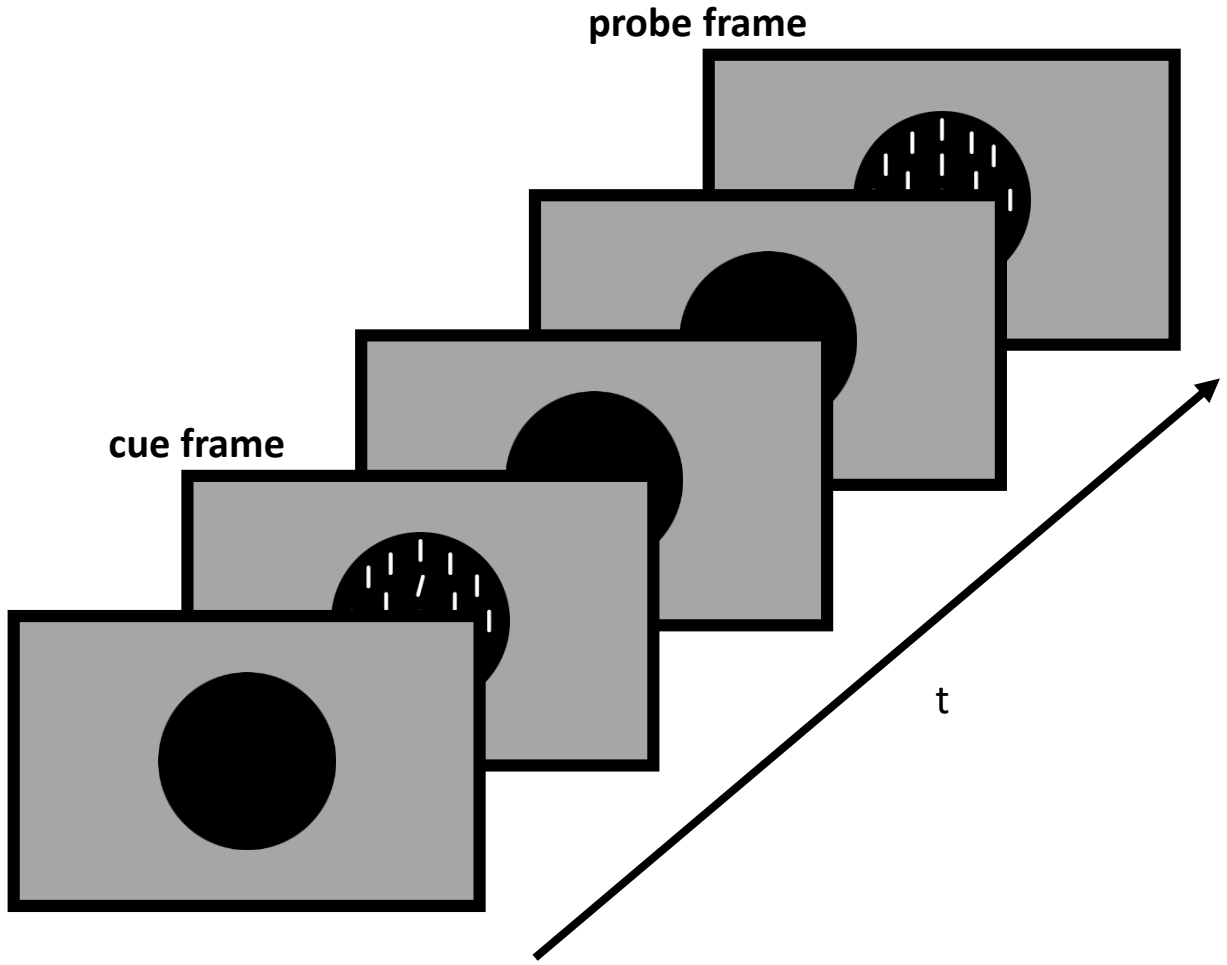
1 DISK CONDITION

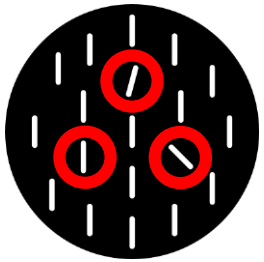


- In each frame, 1 disk will be presented in the middle of the screen, and you will see 5 frames in each trial
- In each trial, in the second and the last frame, multiple bars will be presented on the disk as shown below



- The second frame is called **cue frame**, and the last frame is called **probe frame**
- In the cue frame, there will be two tilted bars, one in 15° (target) and the other in 45°(distractor)
- In the probe frame, one bar will be tilted in 15°(target)
- Each bar can be tilted either in clockwise or counter-clockwise manner from upward
- Your task is to detect either the target bars (15° tilted bars) in cue and probe frames are tilted in the same direction or not
- You have to ignore the 45°(distractor) bar in the cue frame
- If both are tilted in a same direction (both clockwise or counter-clockwise) press the left button, the right button for the different directions

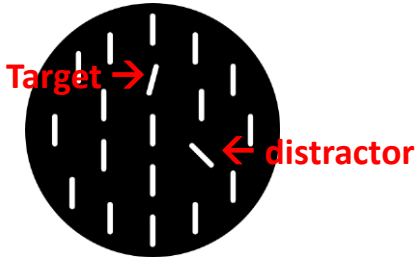
Continue …



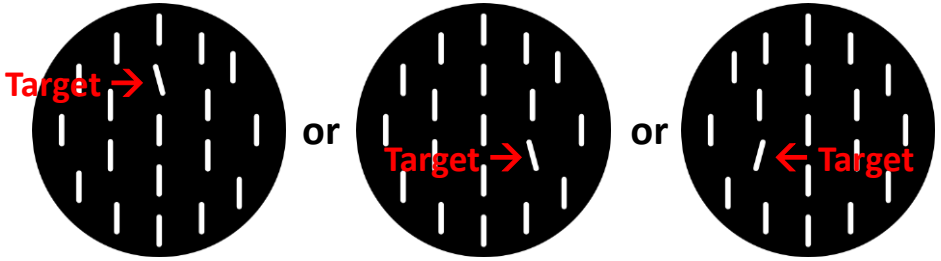
- There are three possible positions for the tilted bars (red circles)
- In the cue frame, the target bar (15°) and the distractor bar (45°) are presented in the two different positions
- In the probe frame, the target bar (15°) can be presented in any of three positions, therefore, it will be in the same position as cue-target position, cue-distractor position, or the third position

ex. Cue frame and Probe frames

Cue frame



Probe frame



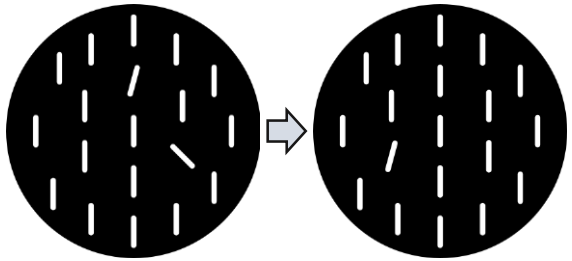
Same position as cue-target

Same position as cue-distractor

The third position

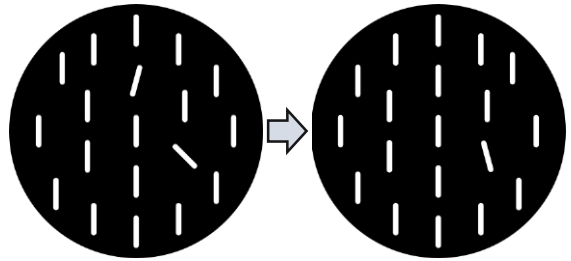
- But the target positions are not important, your task is to detect whether target bars in cue and probe frames are tilted in a same direction or not
- If both are tilted in a same direction (both clockwise or counter-clockwise) press the left button, the right button for the different directions

Cue frame **Probe frame**



Same direction:
left button (arrow)

Cue frame **Probe frame**

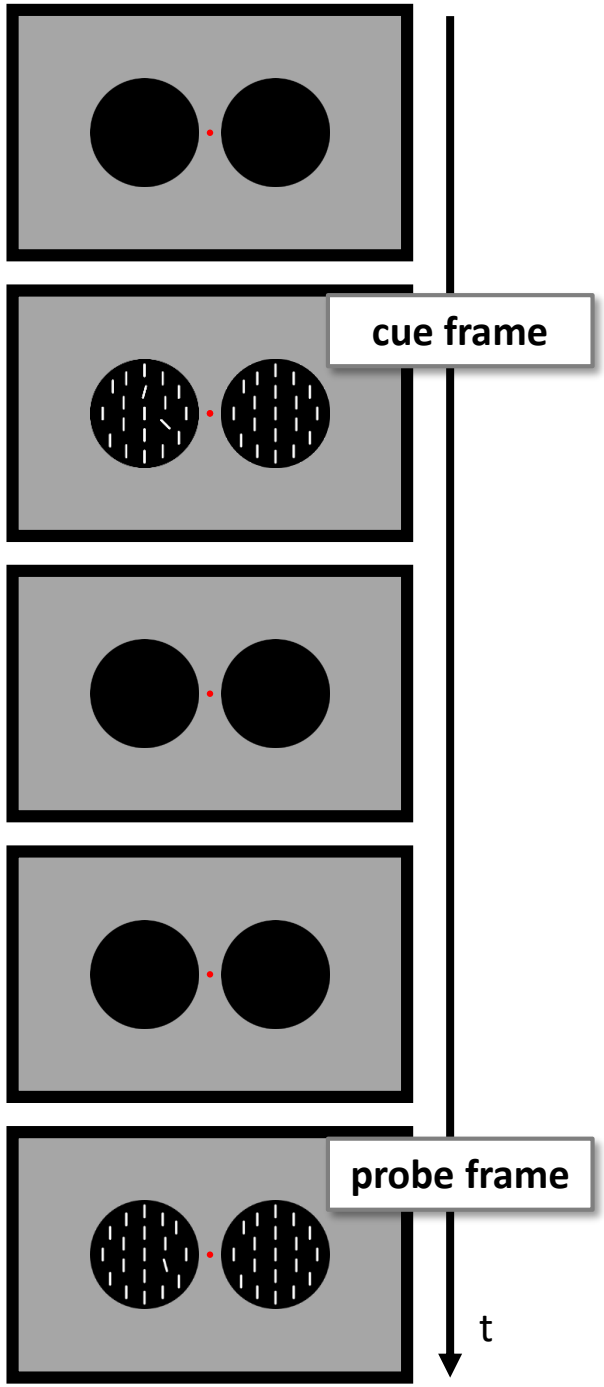


Different direction:
right button (arrow)

Example

Task: Report if the 15° tilted bars are tilted in the same direction (left button) or the opposite direction (right button)

2 DISK CONDITION

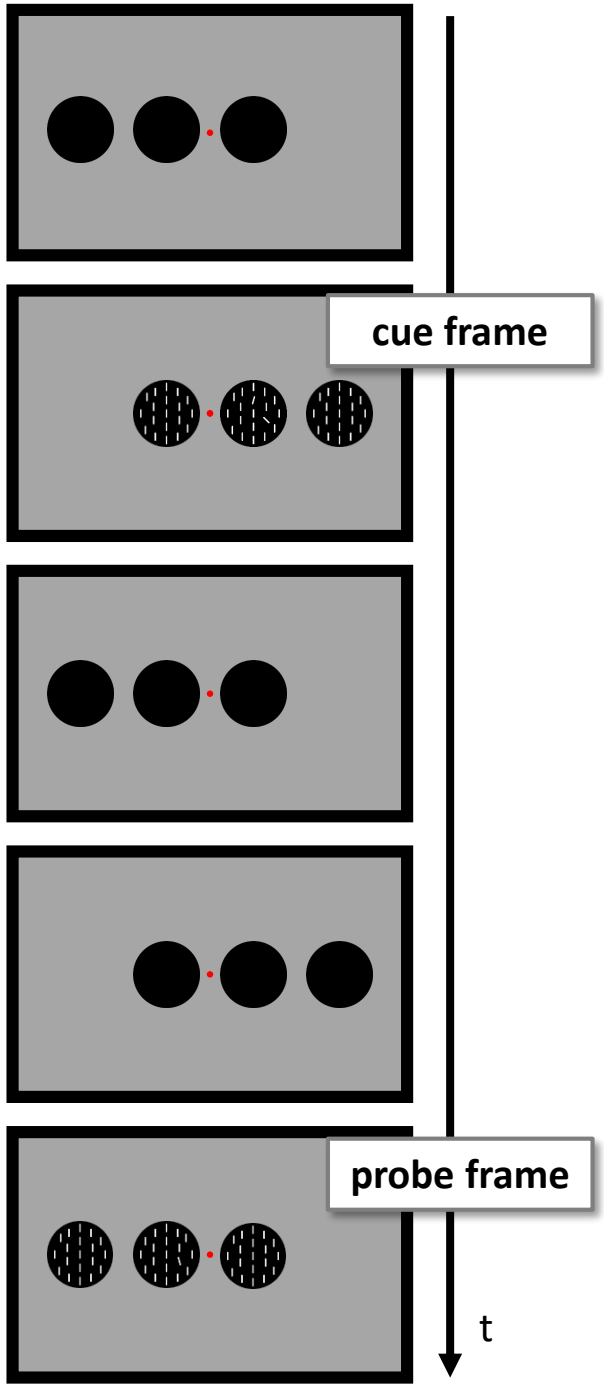


- Please fixate your eyes on **the red fixation dot** all the time
- Your task is the same, except there will be two disks
- Tilted bars will be always presented in the left disk
- Your task is to detect either the target bars (15° tilted bars) in cue and probe frames are tilted in the same direction (left button) or not (right button)
- Again, you have to ignore the 45°(distractor) bar in the cue frame

Example

Task: Report the Same (left) / Opposite (right) tilt of the target bar (15°) in the left disk

3 DISK NON-RET CONDITION

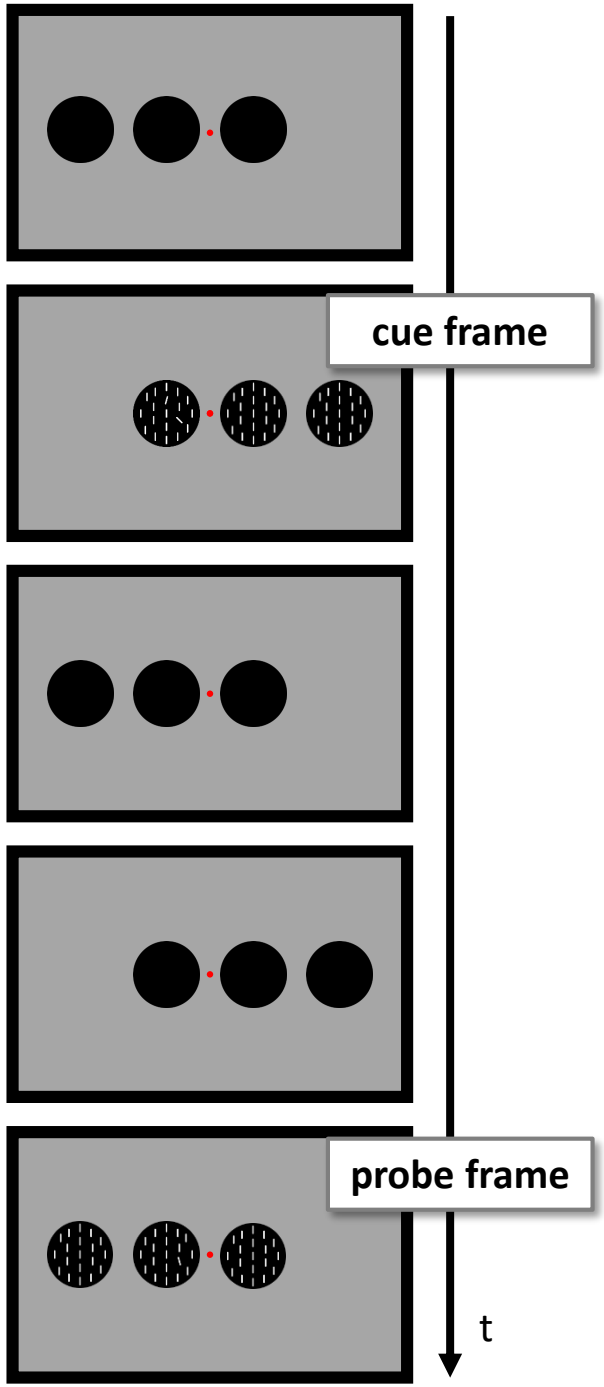


- Please fixate your eyes on **the red fixation dot** all the time
- Your task is the same, except there will be three disks
- Tilted bars will be always presented in the middle disk
- Your task is to detect either the target bars (15° tilted bars) in cue and probe frames are tilted in the same direction (left button) or not (right button)
- Again, you have to ignore the 45°(distractor) bar in the cue frame

Example

Task: Report the Same (left) / Opposite (right) tilt of the target bar (15°) in the middle disk

3 DISK RET CONDITION



- Please fixate your eyes on **the red fixation dot** all the time
- Your task is the same, except the tilted bars will be presented in different disks
- In the cue frame, tilted bars will be presented in the left most disk
- In the probe frame, tilted bars will be presented in the middle disk
- Thus, the tilted bars are always presented in the disk on the left side of the fixation dot
- Your task is to detect either the target bars (15° tilted bars) in cue and probe frames are tilted in the same direction (left button) or not (right button)
- Again, you have to ignore the 45°(distractor) bar in the cue frame

Example

Task: Report the Same (left) / Opposite (right) tilt of the target bar (15°) in the target disks

The cue frame's target disk is the *left most* disk and the probe frame's target disk is the *middle* disk

Additional question after the experiment

1. Were the disks flickering (on/off) or moving left-and-right as a group?
   (1) each disk was flickering on and off ---------- (5) three disks were moving left-and-right as a group