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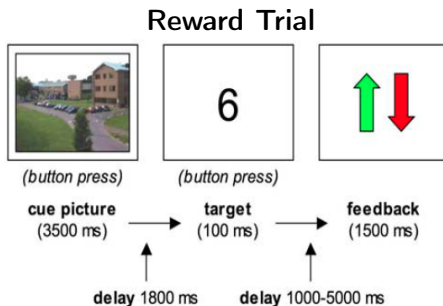
Delayed Monetary Incentive Reward Task

November 6, 2013

General Overview

- 2 conditions (blocks)
 - Reward
 - 135 reward trials; 45 neutral trials
 - Neutral
 - 45 reward trials; 135 neutral trials
- Each lasted 36 minutes in Schott paper
- But they did PET over 2 days!
- So, I suppose we would aim for approximately 20 minute blocks?

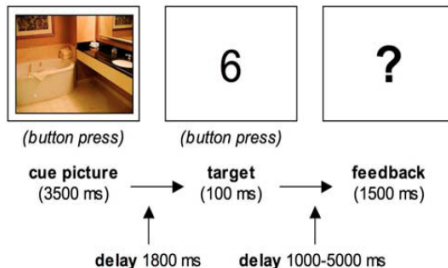
Reward Condition



- In this example, outdoor scene is reward cue (counterbalanced with indoor scene across subjects)
- See green arrow if correct (80%) of trials
- See red arrow if incorrect or too slow to respond; (20%) of trials
- Gain 50 cents on correct trials; lose 20 cents on incorrect trials

Reward Condition

Neutral Trial

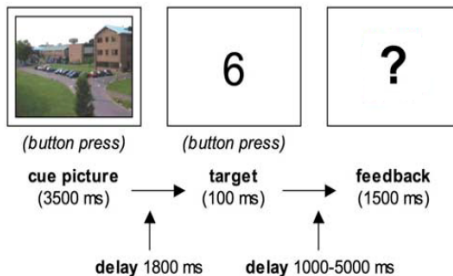


- In this example, indoor scene is neutral cue (counterbalanced with outdoor scene across subjects)
- Always see a question mark as the outcome



Neutral Condition

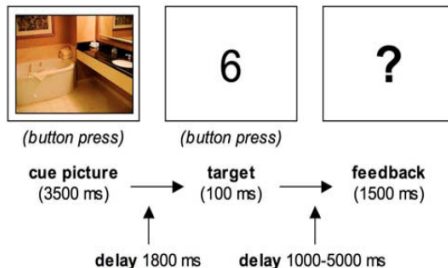
Reward Trial - Bogus!



- In this example, outdoor scene is reward cue (counterbalanced with indoor scene across subjects)
- But subjects see a question mark as the outcome! - Bogus!

Neutral Condition

Neutral Trial



- In this example, indoor scene is neutral cue (counterbalanced with outdoor scene across subjects)
- Always see a question mark as the outcome

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Some Important Notes

- Subjects responded with a button press to indicate whether they saw an indoor or outdoor scene during cue phase
- Neutral condition contains inverse trial structure from reward condition to minimize sensorimotor and cognitive processing differences
- Subjects were explicitly told the trial structure of the blocks.

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Lingering Questions

- Block Length?
- Jitter in between cue and number comparison?



REWARD (correct)

here indoor is the reward cue



CUE for 3.5s



review of task

task presentation: reward block

○○●○○○
○○○○○○
○○○○○○

task presentation: neutral block

○○○○○○
○○○○○○

reward block - reward correct

1.8s wait

○○●○○
○○○○○
○○○○○

○○○○○
○○○○○

Number for 0.1s

2

○○○○●○○
○○○○○○○
○○○○○○○

○○○○○○○
○○○○○○○

reward block - reward correct

variable response window (80% correct)

you respond correctly and in time

review of task

task presentation: reward block

○○○○●○
○○○○○○
○○○○○○

task presentation: neutral block

○○○○○
○○○○○

reward block - reward correct

wait for 1 to 6 secs

○○○○○○●
○○○○○○○
○○○○○○○

○○○○○○
○○○○○○

reward block - reward correct

see reward/loss for 1.5s





REWARD (incorrect)

here indoor is the reward cue



CUE for 3.5s



review of task

task presentation: reward block

○○○○○○○
○○●○○○○
○○○○○○○

task presentation: neutral block

○○○○○○○
○○○○○○○

reward block - reward incorrect

1.8s wait



Number for 0.1s

4

review of task

task presentation: reward block

○○○○○○○
○○○○●○○
○○○○○○○

task presentation: neutral block

○○○○○○○
○○○○○○○

reward block - reward incorrect

variable response window (80% correct)

you respond incorrectly or not in time

review of task

task presentation: reward block

○○○○○○○
○○○○○○●○
○○○○○○○

task presentation: neutral block

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○○○○○○○

reward block - reward incorrect

wait for 1 to 6 secs

○○○○○○○
○○○○○○●
○○○○○○○

○○○○○○○
○○○○○○○
○○○○○○○

reward block - reward incorrect

see reward/loss for 1.5s





NEUTRAL

here outdoor is the neutral/unrewarded cue

○○○○○○○
○○○○○○○
○●○○○○○

○○○○○○○
○○○○○○○

CUE for 3.5s



review of task

task presentation: reward block

○○○○○○○
○○○○○○○
○○●○○○

task presentation: neutral block

○○○○○○
○○○○○○

reward block - neutral

1.8s wait



Number for 0.1s

6

review of task

task presentation: reward block

○○○○○○○
○○○○○○○
○○○○●○

task presentation: neutral block

○○○○○
○○○○○

reward block - neutral

wait for 1 to 6 secs

response doesn't matter

○○○○○○○
○○○○○○○
○○○○○●

○○○○○○
○○○○○○

see reward/loss for 1.5s

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○○○○○○○
○○○○○○○
○○○○○○○

●○○○○○
○○○○○○○

REWARD (correct)

here indoor is the reward cue

○○○○○○○
○○○○○○○
○○○○○○○

○●○○○○
○○○○○○

neutral block - reward correct

CUE for 3.5s



review of task

task presentation: reward block

○○○○○○○
○○○○○○○
○○○○○○○

task presentation: neutral block

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○○○○○○

neutral block - reward correct

1.8s wait

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○○○○○○○
○○○○○○○

○○○●○○
○○○○○

Number for 0.1s

2

review of task

task presentation: reward block

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○○○○○○○
○○○○○○○

task presentation: neutral block

○○○○●○
○○○○○○

neutral block - reward correct

wait for 1 to 6 secs

○○○○○○○
○○○○○○○
○○○○○○○

○○○○○●
○○○○○○

see reward/loss for 1.5s

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○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○

○ ○ ○ ○ ○ ○ ○
● ○ ○ ○ ○ ○ ○

NEUTRAL

here outdoor is the neutral/unrewarded cue

CUE for 3.5s



review of task

task presentation: reward block

○○○○○○○
○○○○○○○
○○○○○○○

task presentation: neutral block

○○○○○○○
○○●○○○

neutral block - neutral

1.8s wait

○○○○○○○
○○○○○○○
○○○○○○○

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○○○○○○
○○●○○○

neutral block - neutral

Number for 0.1s

8

review of task

task presentation: reward block

○○○○○○○
○○○○○○○
○○○○○○○

task presentation: neutral block

○○○○○○○
○○○○●○

neutral block - neutral

wait for 1 to 6 secs

response doesn't matter

○○○○○○○
○○○○○○○
○○○○○○○

○○○○○○○
○○○○○○●

neutral block - neutral

see reward/loss for 1.5s

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