What makes gameplay videos enjoyable to watch?

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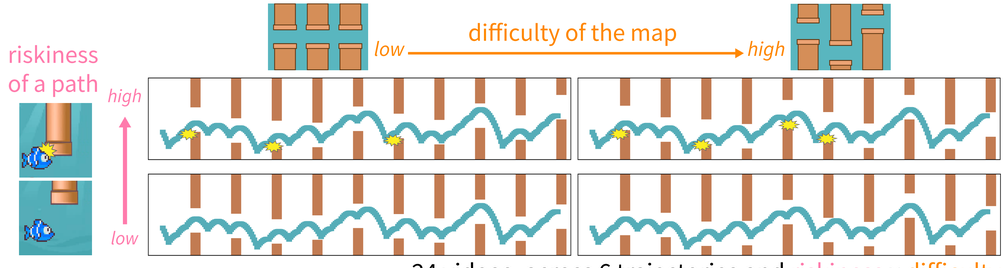
QUESTION

What makes some action sequences more enjoyable to watch than others?

METHODS

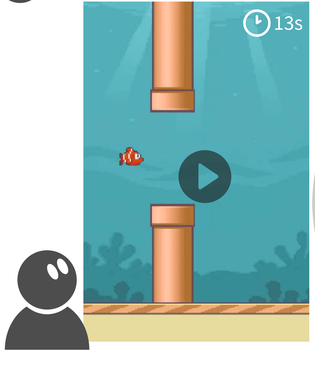
1 stimulus generation

We used simulated player agents to estimate two video properties: difficulty and riskiness.



24 videos, across 6 trajectories and riskiness x difficulty

2 experiment procedure

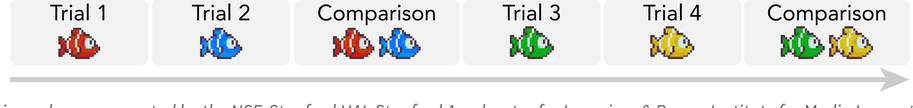


Participants were randomly assigned to three conditions, performing different rating tasks.

How much did you **enjoy** watching this video?
Please tell us how fun it was to watch, compared to other videos you might watch of someone playing this game.
n=288

How much **risk** did you think the player was in overall?
Please think about how likely it seemed that the run could have ended in a crash at any point.
n=288

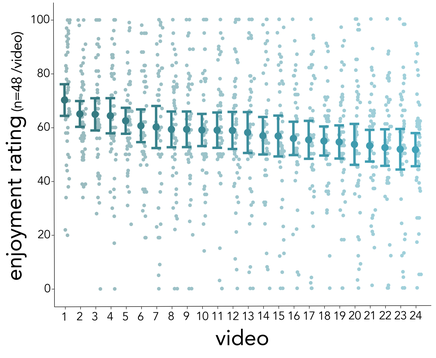
How **difficult** did you think the obstacle course was?
Please think about how likely players would be to crash on this obstacle course, regardless of how well this player performed this time.
n=288



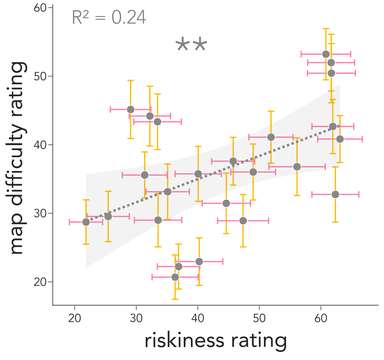
This work was supported by the NSF, Stanford HAI, Stanford Accelerator for Learning, & Brown Institute for Media Innovation.

RESULTS

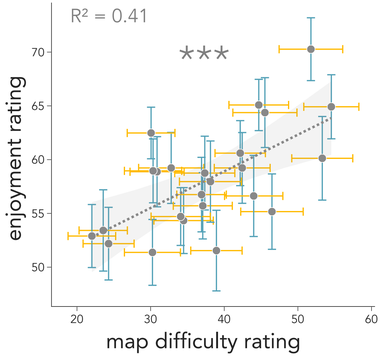
Videos varied in how enjoyable they were to watch.



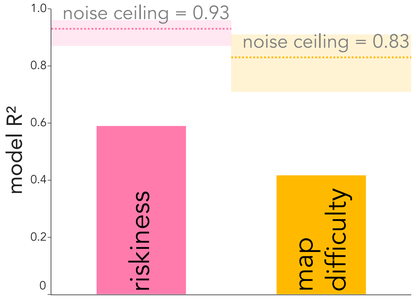
Videos judged as riskier were associated with higher map difficulty ratings.



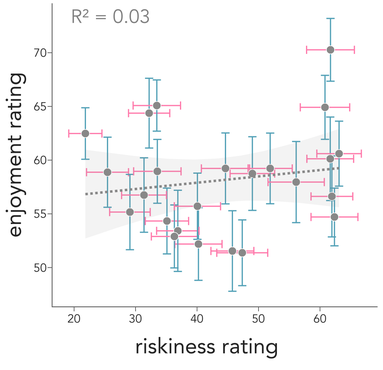
Videos judged to have higher map difficulty were also reliably rated as more enjoyable.



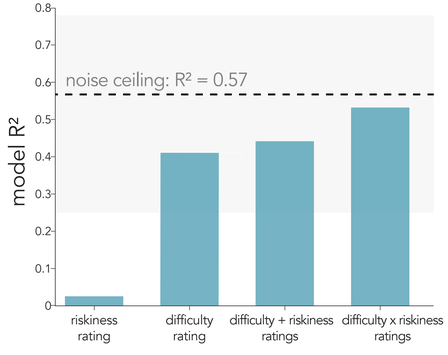
Ratings of path riskiness & map difficulty were correlated with model-based estimates.



More enjoyable videos were not always judged to involve riskier paths.



The interaction between difficulty & riskiness moderately explained how enjoyable videos are.



DISCUSSION

How much people enjoyed a video was better predicted by stable features of the environment rather than by the specific trajectory the agent took.

Future work should develop input-computable models that predict reliable variation in enjoyment, not only in this corpus but also a broad variety of other videos.