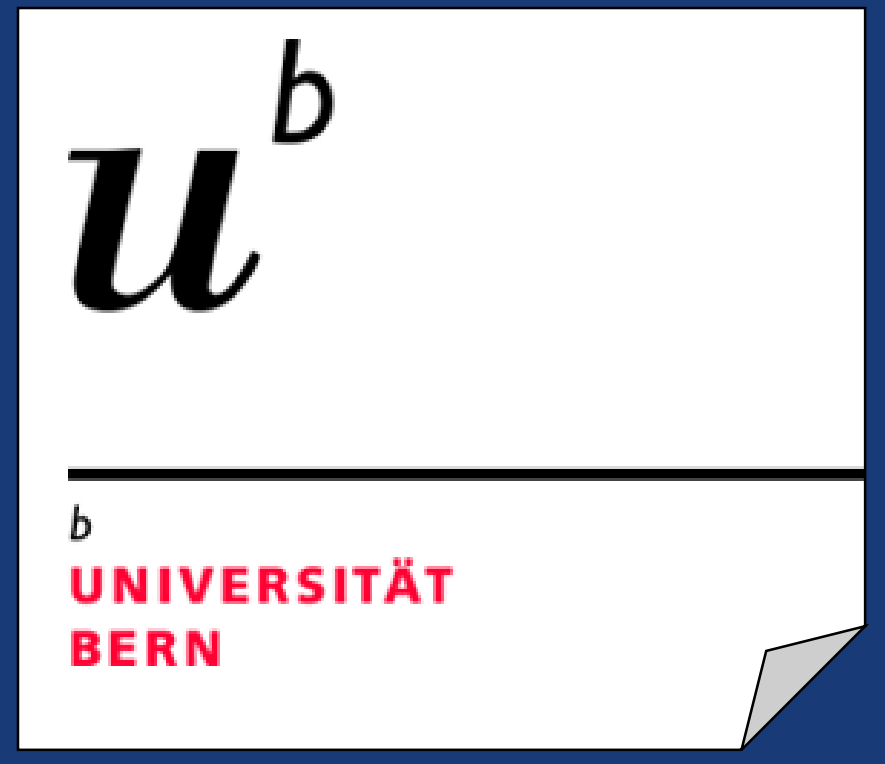




Gamifying Intention Memory: Revisiting Ovsiankina

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INTRODUCTION

The Ovsiankina effect refers to the desire to complete interrupted and unfinished tasks. Kurt Lewin (1926) suggested that implementing an intention inherently builds up an internal tension, which persists until the completion of the intention. This theory was later tested empirically by one of his students, Maria Ovsiankina (1928): She presented participants with numerous simple tasks, of which some were interrupted before completion. Ovsiankina reported a reliable tendency of participants trying to resume these unfinished tasks, establishing the eponymous "Ovsiankina effect".

Almost a century later, these findings raise the question of whether they apply to a more contemporary environment. Consequently, we decided to use videogames as tasks, as a computerized study allowed for more standardization. **This study aimed to replicate the Ovsiankina effect using videogames.**

Hypothesis: Interrupted videogames are chosen more frequently for replay than finished videogames.

METHODS

We programmed 16 simple videogames in Unity® (2021) using pixel art assets. Each game was controlled with either the mouse or the arrow keys and was preceded by a short instruction. The order of interrupts and games played were counterbalanced.

Of these 16 games, half were interrupted midway. When interrupted, participants were prompted with a message that time had run out and the game could not be finished. After playing all videogames, participants were asked to select which games they'd like to play again.

We tested $N = 96$ participants ($M_{age} = 29.99$, $SD_{age} = 15.68$), of which 33 identified as male (34.38%) and 63 identified as female (65.62%).



Figure 1. Graphical representation of the methods used in this study. The red bell symbolises an interrupted game. After playing the 16 videogames, all games were presented in a 4x4 matrix for participants to select from.

RESULTS

We performed a logistic regression to investigate the effects of the interrupt on the likelihood of choosing a game for replay while controlling for the enjoyment of the game. The logistic regression model was significant, $\chi^2(2) = 418.64$, $p < .001$. The model explained 32% Variance (Nagelkerke R^2) and correctly classified 74.0% of cases.

Interrupted games were **1.34 times more likely to be chosen for replay** (OR = 1.34, 95% CI[1.06, 1.69]). Further, increased enjoyment of the game was associated with a higher likelihood of being chosen for replay (OR = 2.65, 95% CI[2.38, 2.96]).

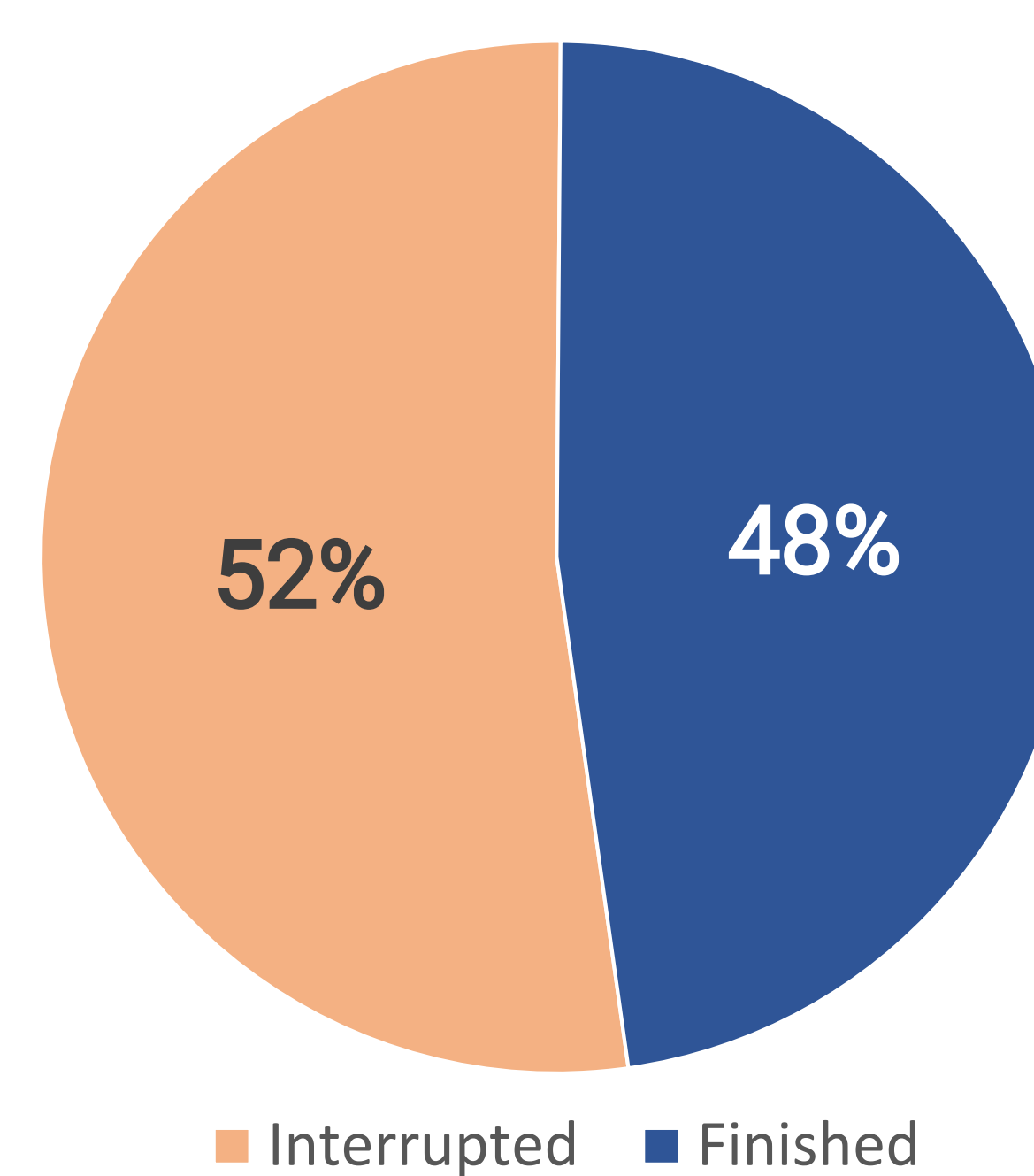


Figure 3. Percentages of chosen finished and interrupted games for replay.

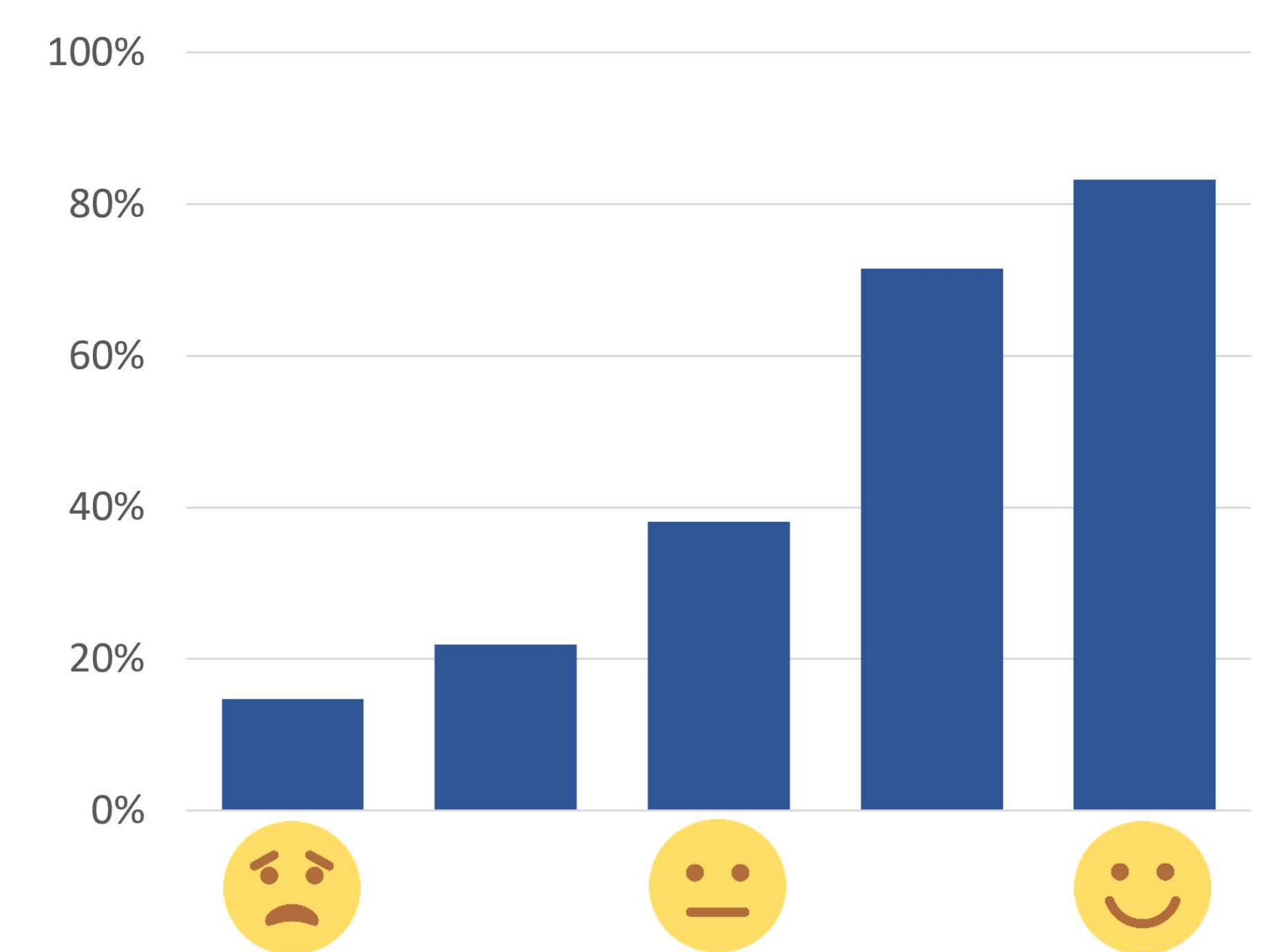


Figure 4. Likelihood of games being chosen for replay based on the rating of enjoyment.

CONCLUSION

Interrupted tasks persist and result in a urge to complete them. When given the opportunity, we are more likely to resume tasks that were previously interrupted, rather than repeating previously finished tasks. **Conclusively, we successfully replicated the Ovsiankina effect in videogames.**

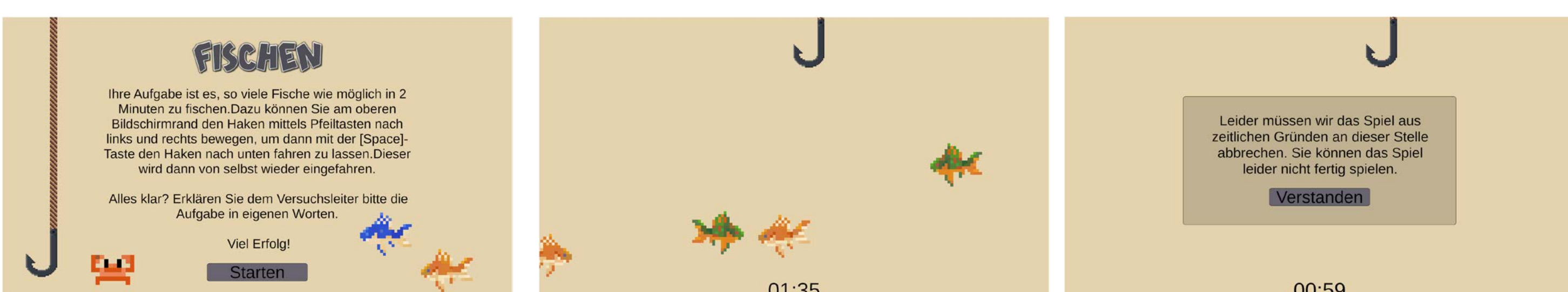


Figure 3. Example of the procedure for each of the 16 games played using the game "Fishing". After an introduction, participants either finished the game or were interrupted halfway through reaching the goal of the game.