Winning Isn't Everything:

The impact of optimally challenging Smartphone games on flow, game preference and individuals gaming to escape aversive bored states

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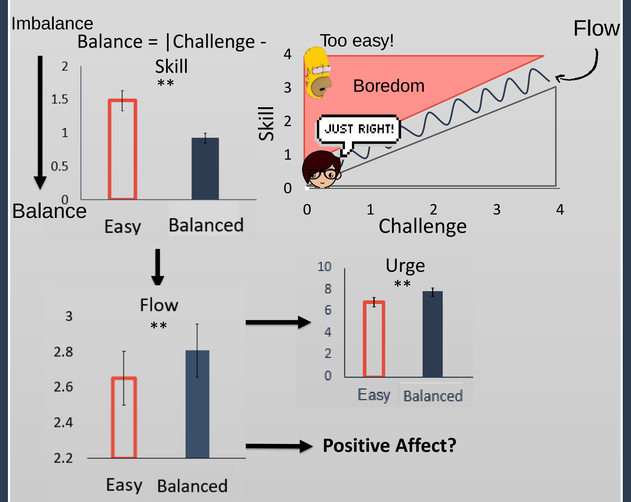
Introduction

- Some people turn to videogames as a coping method for negative affect in their everyday lives – a situation similar to slot machine players who gamble to "escape".
- What is less understood is the extent to which certain players treat smartphone gaming specifically as a form of escape or relief from the state of **boredom**.
- Players with such motives may find "flow" extremely motivating while immersed in game play.

Flow: a highly pleasurable, motivating state characterized by a narrowed attention and an effortless sense of deep concentration during gameplay.

Measuring Flow: Skill-Challenge Balance Model in Candy Crush (Larche & Dixon, 2020)



Research Questions + Hypotheses

A. Can we replicate balance, flow and urge findings from Larche & Dixon (2020)? Do flow inducing games lead to greater positive affect?
Does higher urge for balanced games translate to players actively selecting to replay these games?

B. Are escape players more prone to boredom?
Do Candy Crush players who game to escape experience greater immersion, positive affect, and urge-to-play compared to non-escape players?

Methods

Subjective State Measures

1. Game Experience Questionnaire (GEQ) Subscales
   - **1a. Perceived Challenge**
   - **1b. Perceived Skill**
   - **1c. Flow**
   - **1d. Positive Affect**
2. Urge-to-play.
3. Game Preference

Trait Measures

1. Aversive Mood Outside the Context of Gameplay
   - **1a. Boredom Proneness** (Boredom Proneness Scale)
   - **1b. Depression** (DASS-21)
2. Problem Videogaming (Problem Video Gaming Questionnaire)
3. Tendency to Play o Escape (Reasons For Gaming Scale)

Characterizing Escape Players using Reasons for Gaming Scale Scores

Lower Tercile — **N = 60** — Upper Tercile

n non-escape = **20**

n escape = **20**

Procedure

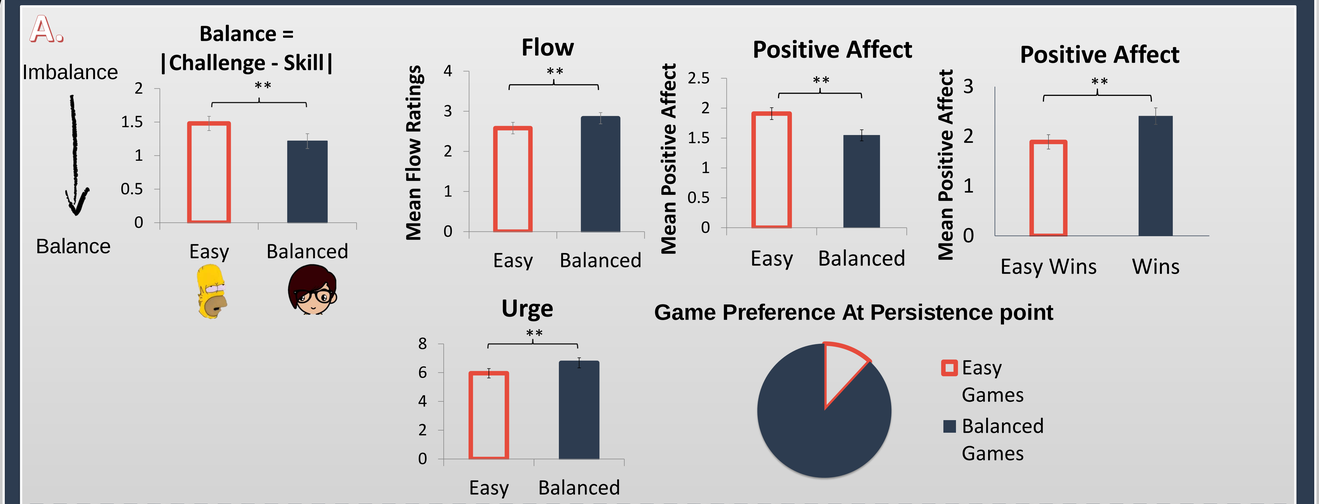
4 easy games from very beginning of the game + 4 games At level standing

Preference Point (after 8 games)

Easy OR Balanced

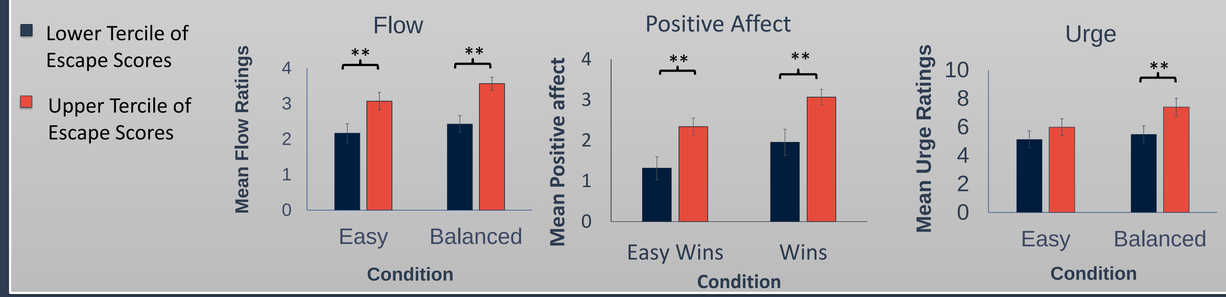
Results

A.



B.

	Problem Videogame Play	Gaming Frequency	Boredom Proneness	Depression
Escape	r = .435**	r = .319*	r = .254*	r = .183



Discussion & Conclusion

A. We successfully replicated findings by Larche & Dixon (2020).

- Our analysis of positive affect scores support the idea that rewards are not solely important for producing the most enjoyable gameplay experience.
- Not only does the skill-challenge balance foster an enjoyable experience by means of flow, but also through a variable-ratio (VR) schedule of reward delivery.
- We have evidence to suggest that flow is not only urge inducing, but actively motivating, evidenced by players' active choice to continue playing the balanced games.

B. Gaming to escape was associated with increased gaming frequency and negative consequences related to problematic smartphone gaming.

- Smartphone game players who play to escape primarily endorsed experiencing boredom proneness in everyday life.
- Escape players became more immersed and experienced more positive affect during gameplay than non-escape players regardless of difficulty – yet only the optimally challenging balanced games triggered heightened motivation.
- If these games can alleviate the negative affect associated with boredom, it sets up a circuit of negative reinforcement that may lead to addiction.
- By understanding escape players' preferential experience of flow, positive affect, and motivation, we can potentially develop tools to help those who develop problematic gameplay behaviours.

References: Larche, C. J., & Dixon, M. J. (2020). The relationship between the skill-challenge balance, game expertise, flow and the urge to keep playing complex mobile games. Journal of Behavioral Addictions.

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