

Scratch cards: near-misses and player experience

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Overview

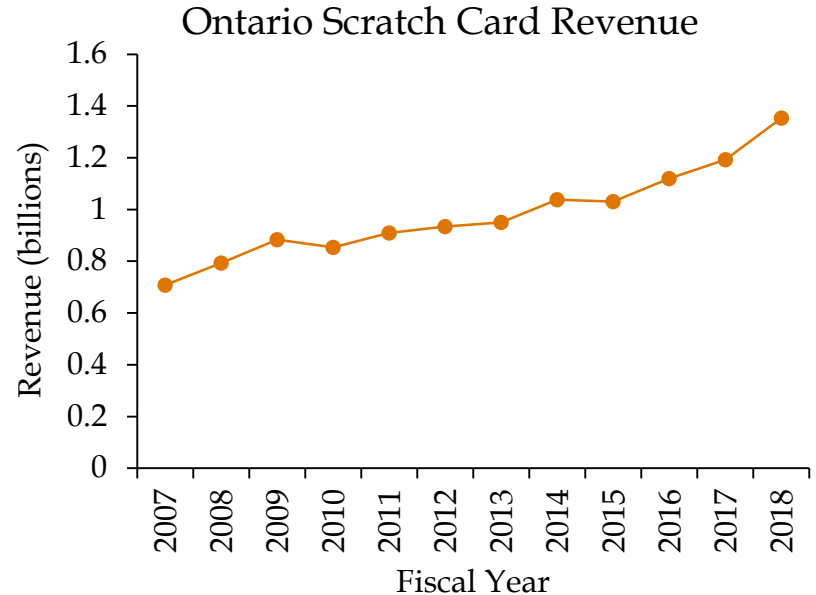
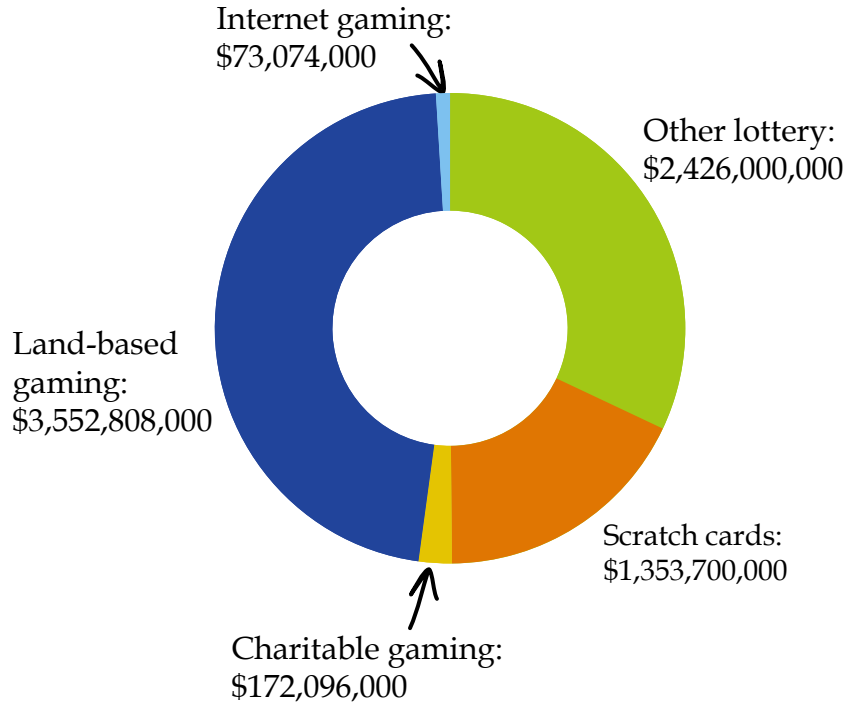
Background

Near-miss effects

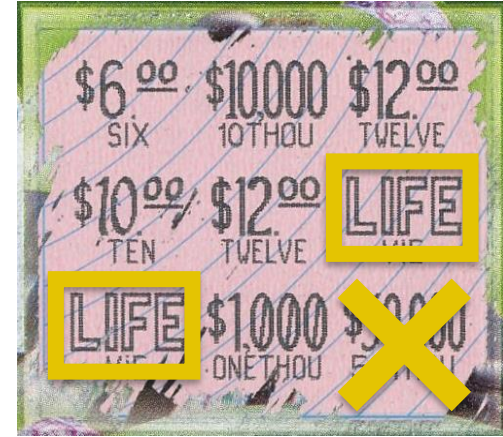
Purchasing behaviour



Big business



Near-miss outcomes



Increase physiological arousal and frustration

(Dixon et al., 2011, 2013)

Recruit reward-related brain areas

(Clark et al., 2009)

Prolong gambling sessions

(Kassinove & Schare, 2001; Côté et al., 2003)



Do scratch card near-misses impact players?

Research question



Are scratch card near-misses physiologically and subjectively arousing, compared to regular losses?

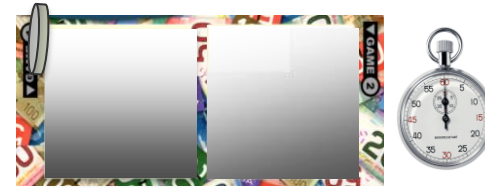
Stange, Graydon & Dixon (2016), *Journal of Gambling Studies*

Design



Skin conductance levels

Post-reinforcement pauses

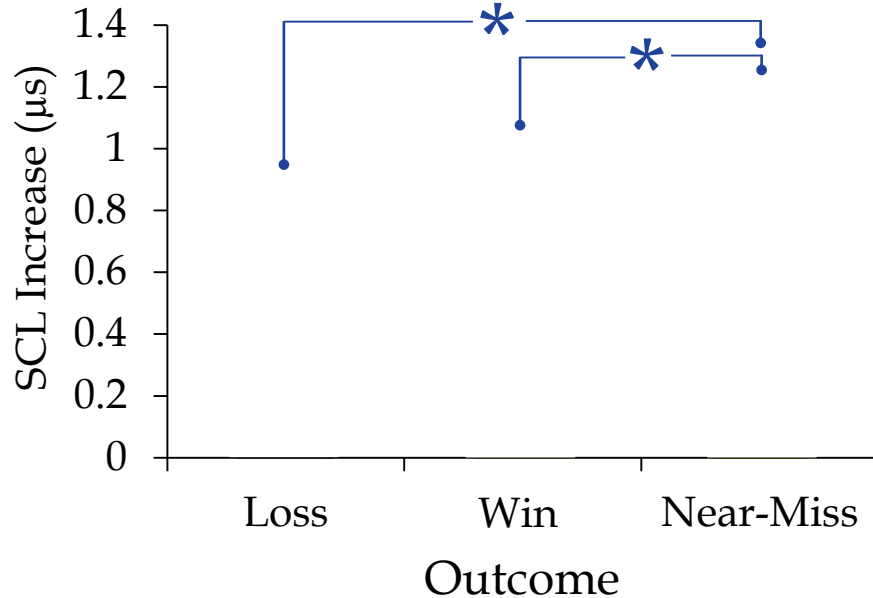


Arousal, mood, frustration

Stange, Graydon & Dixon (2016), *Journal of Gambling Studies*

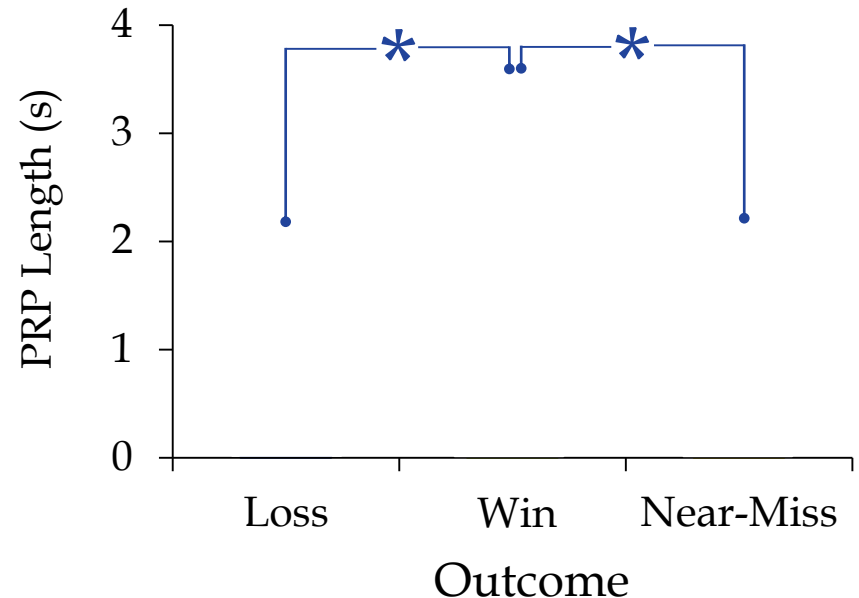
Results

Pre-Outcome Skin Conductance Levels



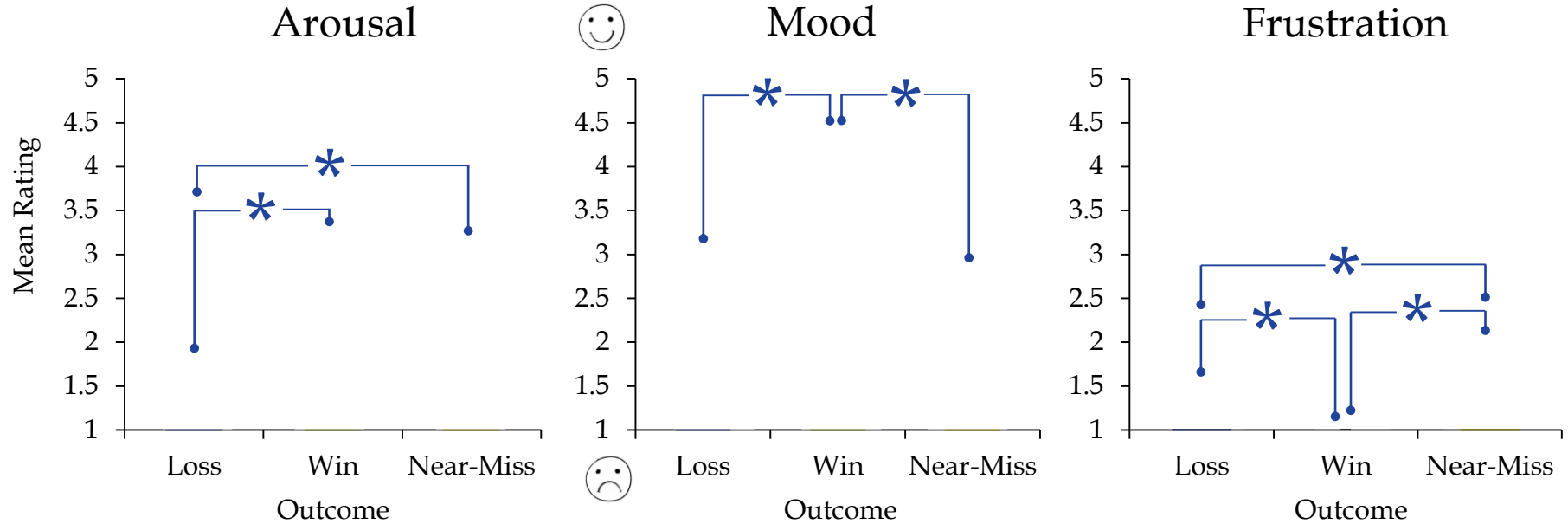
Error Bars \pm SEM

Post-Reinforcement Pauses



Stange, Graydon & Dixon (2016), *Journal of Gambling Studies*

Results



Error Bars \pm SEM

Stange, Graydon & Dixon (2016), *Journal of Gambling Studies*

Conclusions






- ▶ Near-misses are highly frustrating and arousing outcomes
- ▶ Lead players to move onto the next available game quickly
- ▶ “Ramp-up” of arousal during game play

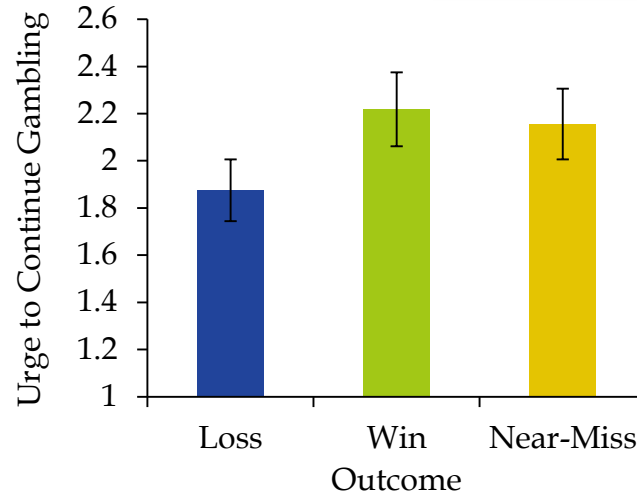
Stange, Graydon & Dixon (2016), *Journal of Gambling Studies*

Next steps

Replicate findings

Converging evidence:

- ▶ Heart rate 
- ▶ Disappointment 
- ▶ Urge to continue gambling 



What effects do these outcomes have on purchasing behaviour?

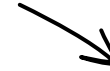
Research question



Do near-miss outcomes influence the decision to purchase additional scratch cards?

Design

Between-subjects manipulation



Small win card



AND

Regular loss card



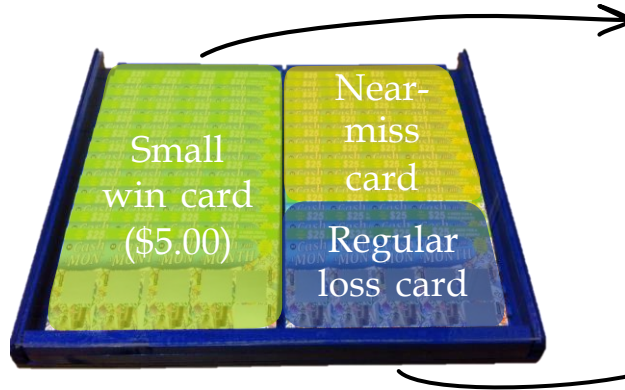
OR

Near-miss card

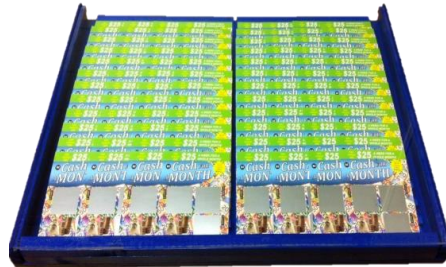


Stange, Graydon & Dixon (2017), *Journal of Gambling Studies*

Method



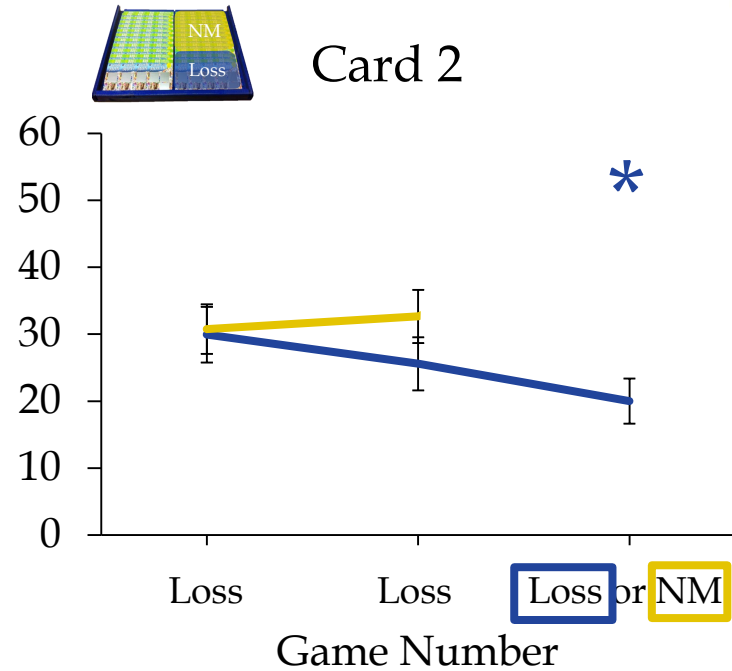
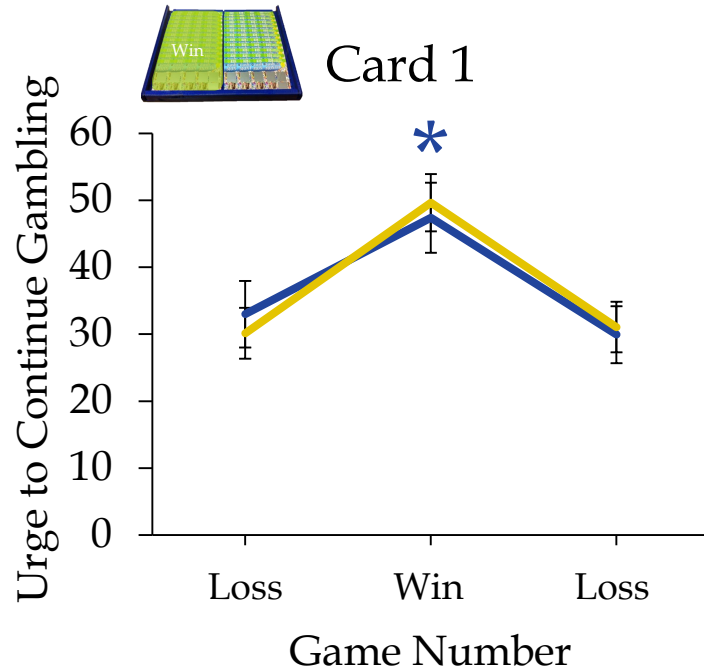
6 ratings total



Max. of 2 additional cards

Stange, Graydon & Dixon (2017), *Journal of Gambling Studies*

Results



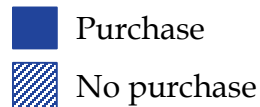
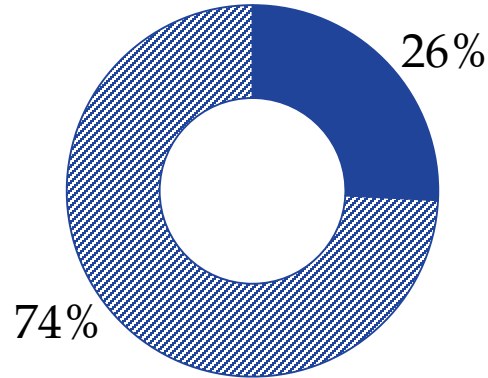
— Loss Group
 — Near-Miss Group Error Bars ± SEM

Stange, Graydon & Dixon (2017), *Journal of Gambling Studies*

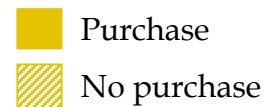
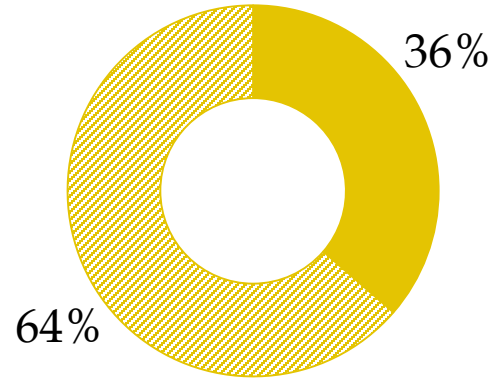
Results



Loss group



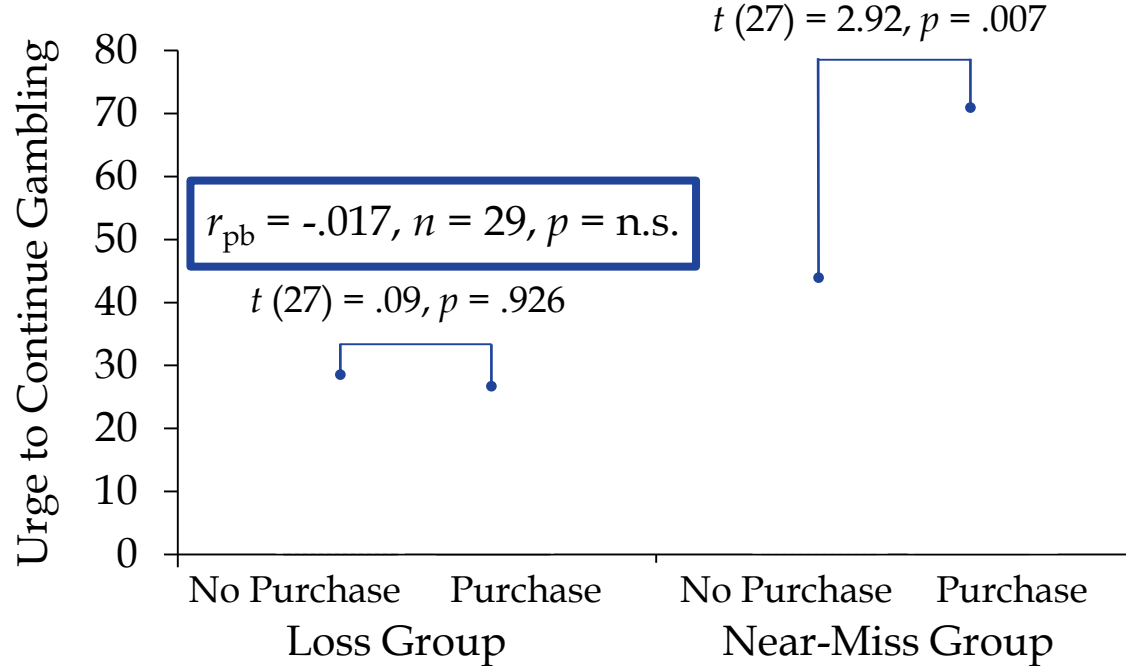
Near-miss group



Stange, Graydon & Dixon (2017), *Journal of Gambling Studies*

Results

$$r_{pb} = .49, n = 29, p < .001$$



Error Bars \pm SEM

Stange, Graydon & Dixon (2017), *Journal of Gambling Studies*

Conclusions



- ▶ Near-misses increase urge to gamble relative to losses
- ▶ Nominal increase in purchasing if exposed to a near-miss
- ▶ For losses, purchasing unrelated to urge; for NMs, purchasing significantly correlated with urge

Stange, Graydon & Dixon (2017), *Journal of Gambling Studies*

Thank you!

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