

CENTRE for GAMBLING RESEARCH at UBC

What are the odds? Win-paired bells and whistles can promote riskier choice.

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a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

Disclosure Statement

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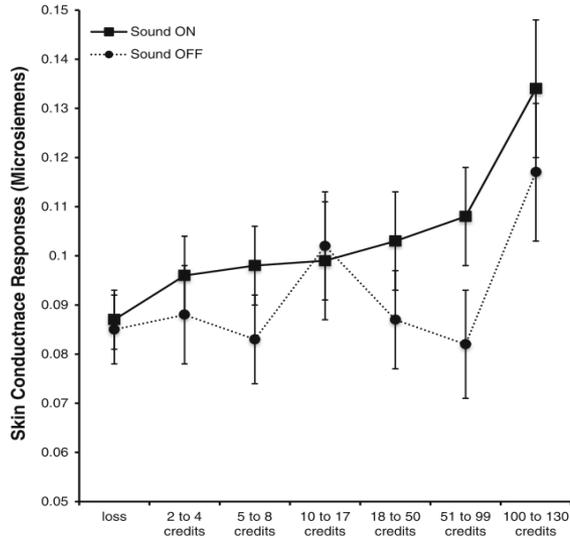
Speaker/travel honorarium: Responsible Gaming Association of New Mexico (US)

Sensory Game Features

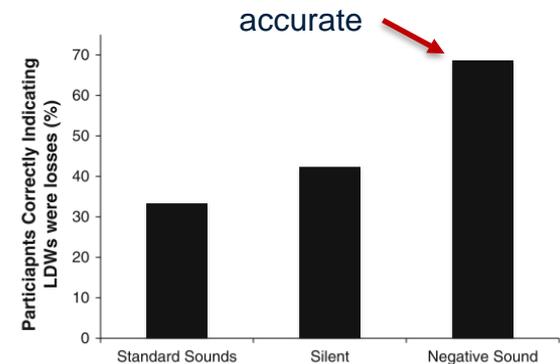
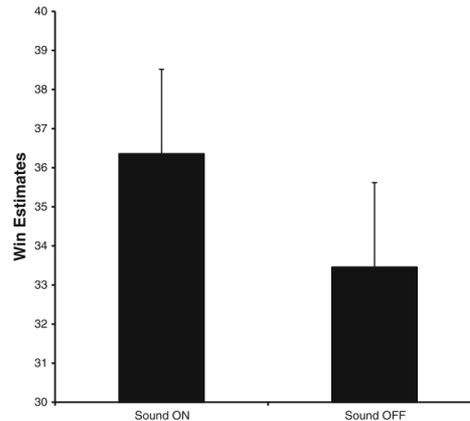


The Effects of “Bells and Whistles”

- Sensory features are attractive to players; increase play enjoyment, excitement (*Griffiths 1990; Dixon et al 2010, Loba et al 2001*)
 - Particularly for pathological gamblers (*Griffiths 1990; Loba et al 2001*)



Slots sounds are arousing
(*Dixon et al 2014*)



Slots sounds help disguise losses as wins
(*Dixon et al 2010, 2014, 2015*)

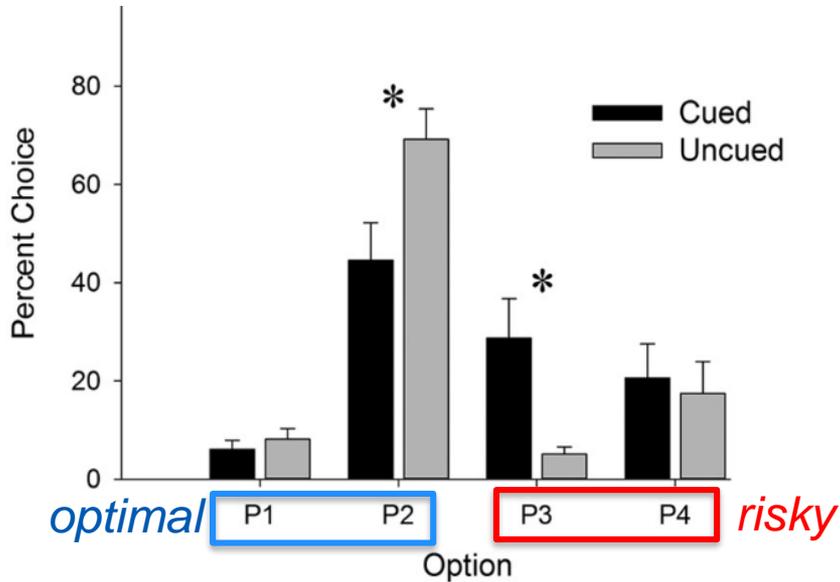
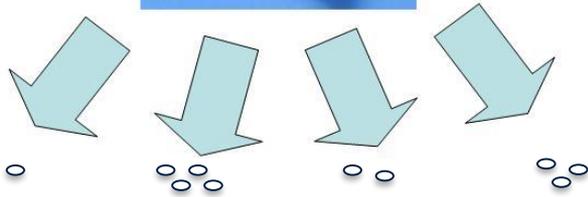
The Effects of Sensory Features on Risky Decision Making



- Decision making deficits in problem gamblers, similar to substance addictions (e.g. Kovacs et al 2017, Bechara et al 2001)
- Evidence of risk-promoting effects of sensory feature in rodents

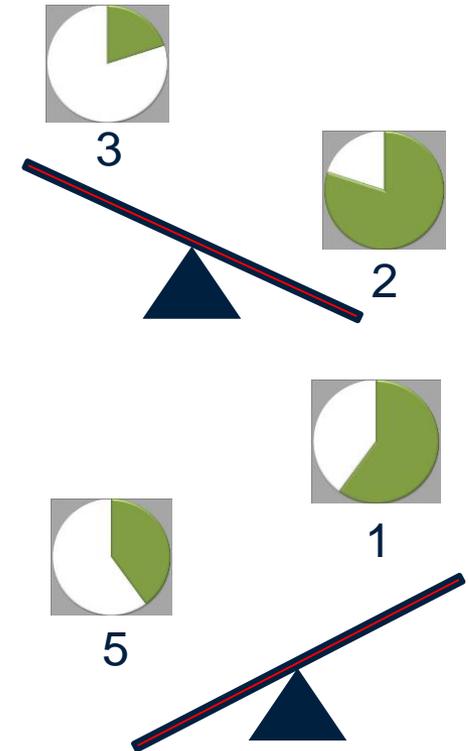
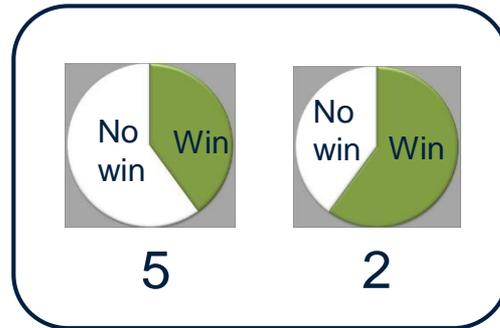


“Bells and Whistles” Promote Riskier Choice in Rodents

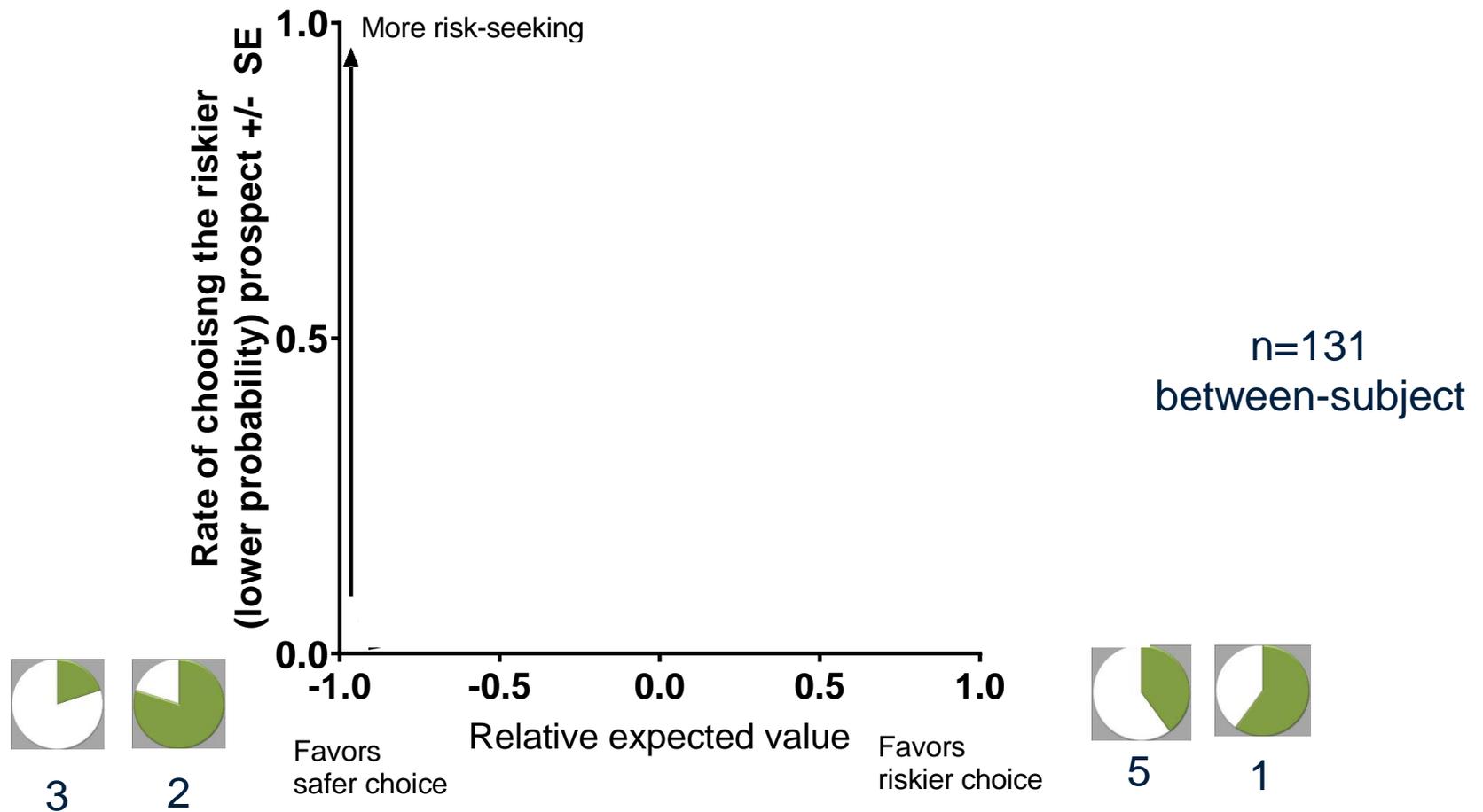


Barrus & Winstranley, *Journal of Neuroscience* 2016

Sensory Features and Risky & Decision Making in Humans

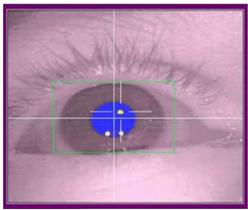


Sensory Features Promote Riskier Choice in Humans

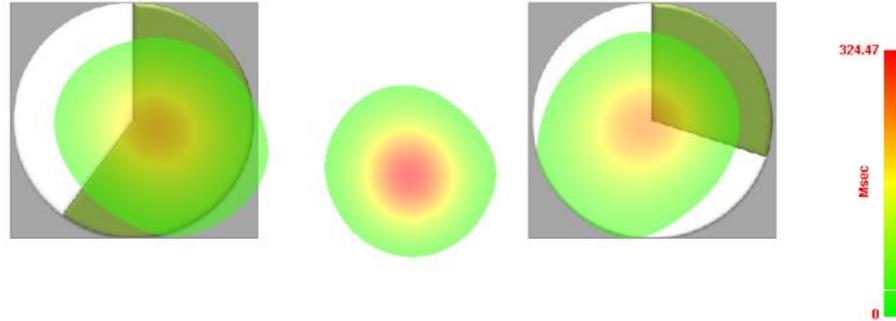


Cherkasova et al, Journal in Neuroscience 2018

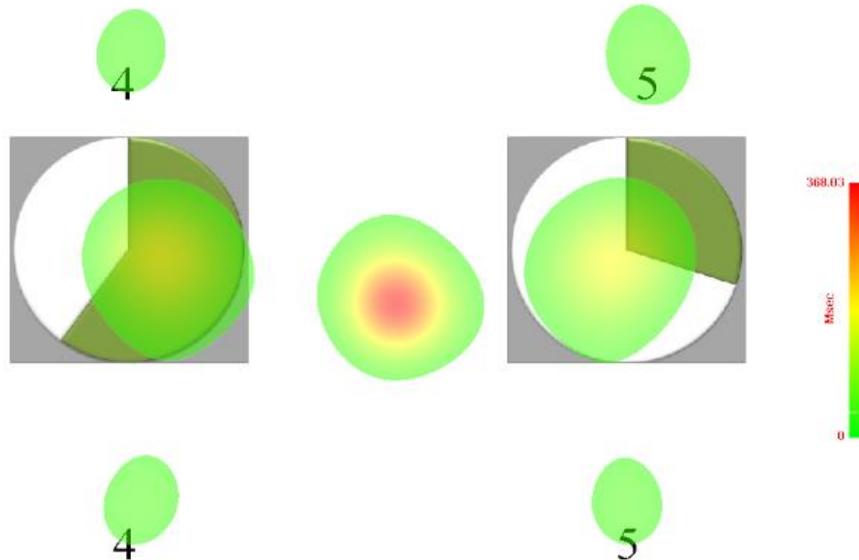
Sensory Features Shift Attention Away From the Odds of Winning



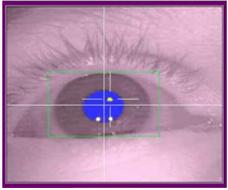
- Sensory features



+ Sensory features



Cherkasova et al, Journal in Neuroscience 2018



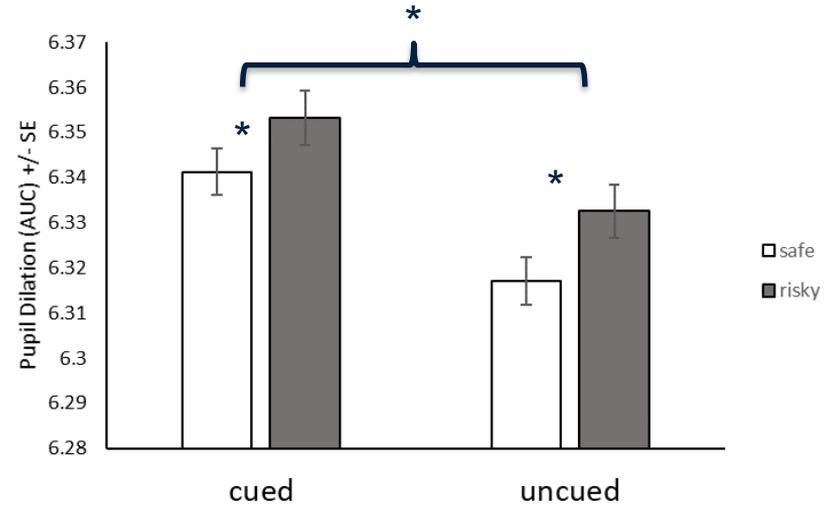
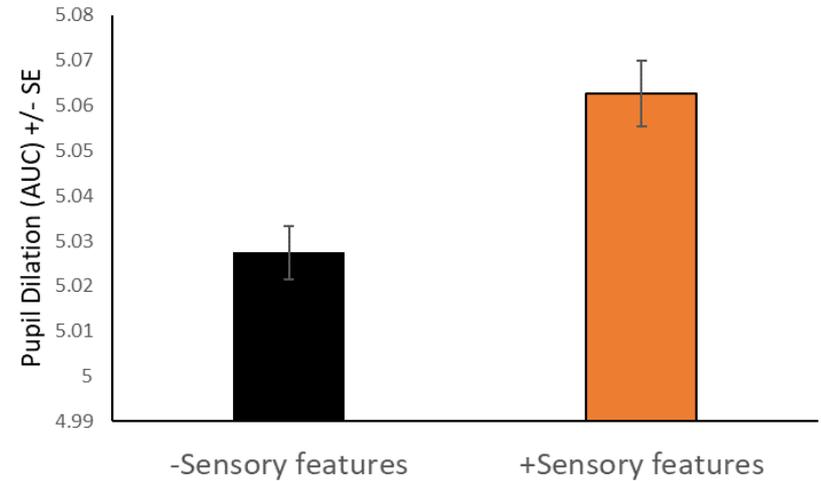
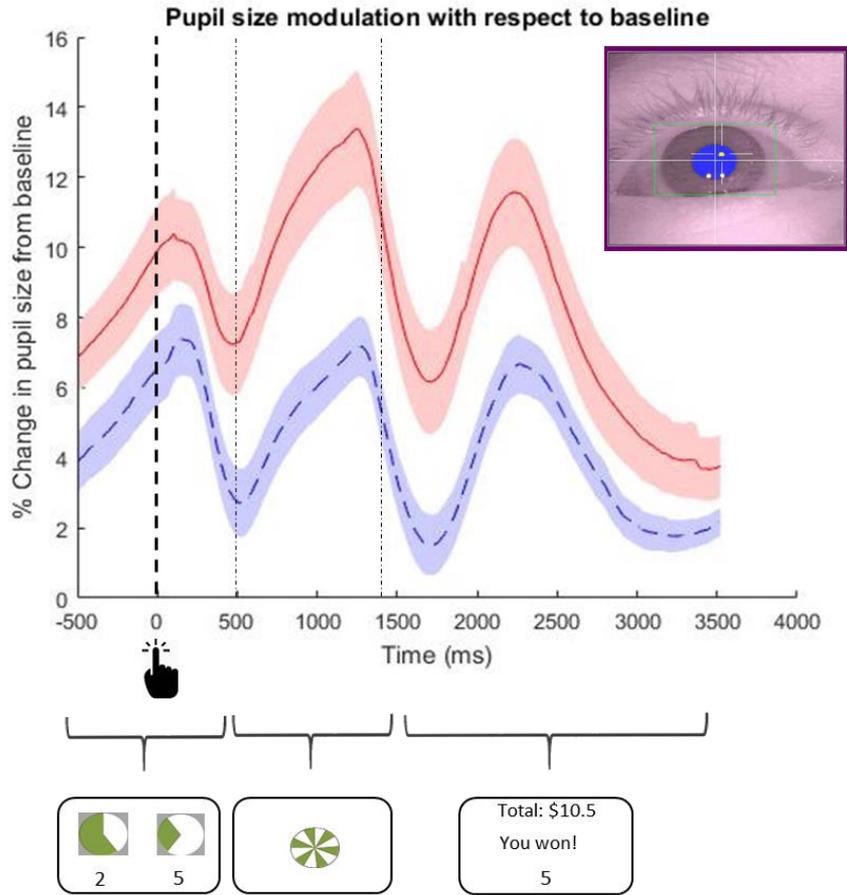
Sensory Features & Arousal

- Slot machine sounds increase arousal (Dixon et al, 2014)
- Gambling associated with increased physiological arousal (e.g. Anderson & Brown, 1984; Diskin, Hodgins, & Skitch, 2003)
- Abnormal patterns of arousal theorized to contribute to problem gambling (e.g. Sharpe & Tarrier, 1993; McConaghy, 1980)

Will sensory features promote arousal in our laboratory task?

Will changes in arousal be related their risk-promoting effects?

Sensory Features Increase Arousal



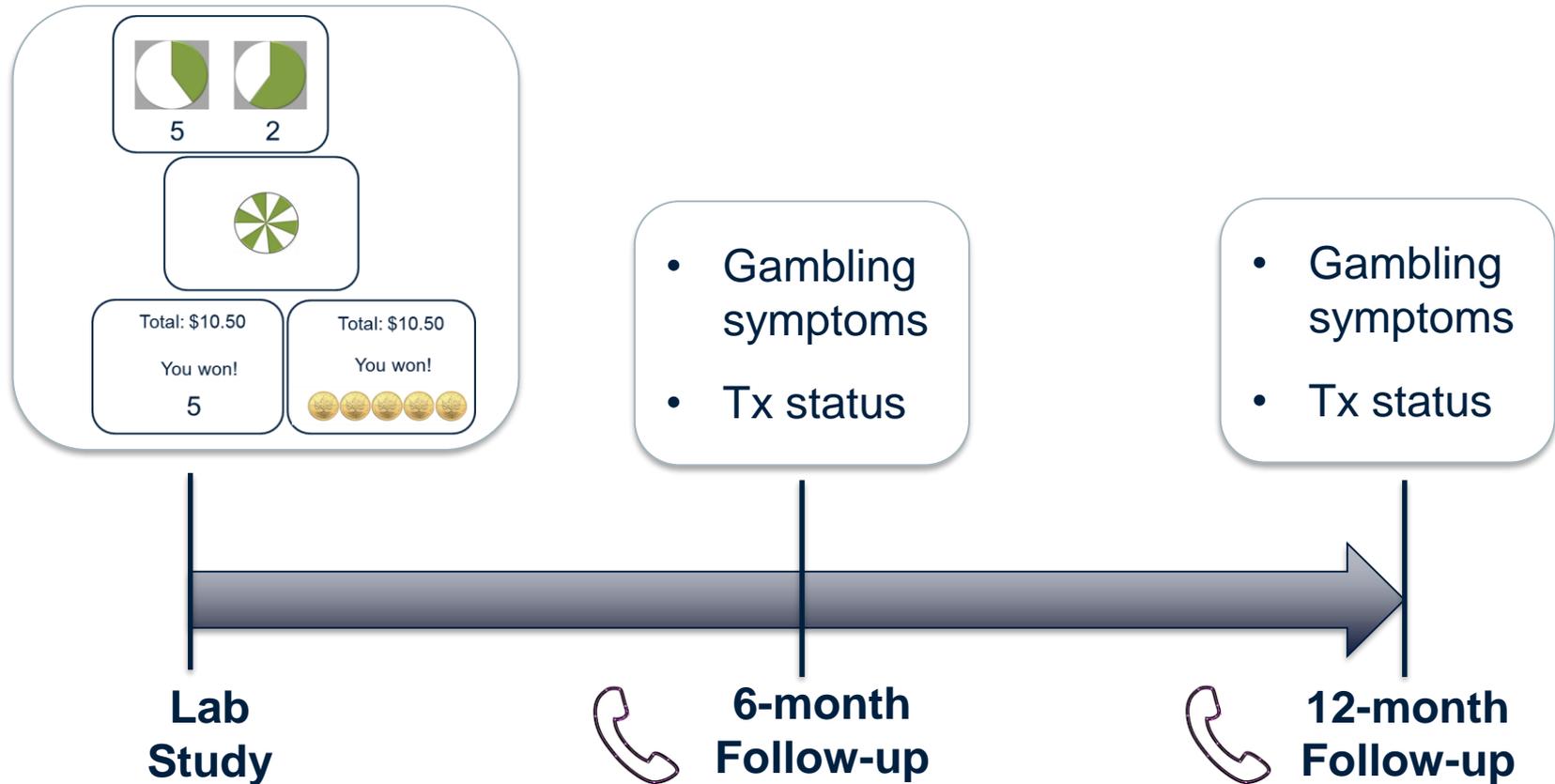
Cherkasova et al, Journal in Neuroscience 2018

Conclusions

- Sensory features
 - Increase play enjoyment
 - Increase arousal
 - Bias win estimates
 - **Promote riskier choice**
 - **Shift attention away from the odds of winning**
- Grounds for regulating sensory game features?
 - If found to promote problem gambling

Future Directions

- Sensory features & decision making in problem gamblers



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