



RUTGERS UNIVERSITY  
Center for Gambling Studies

# RGAMBLING

## NATURAL LANGUAGE PROCESSING ANALYSIS OF A POPULAR ONLINE GAMBLING FORUM

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Work



# GAMBLING AND HARM REDUCTION

- There has been a large increase in gambling availability, driven in part by online offerings
- Public health and harm reduction research lags behind SUDs
  - Much existing research on the topic is focused on land-based data
- Major challenges for harm reduction posed by online gambling (Marrionneau et al. 2023)
  - Broader availability
  - Targeted marketing
  - Difficulties in regulation



# ONLINE COMMUNITIES AND GAMBLING

- Informal networks can be important for those who use substances in avoiding overdose, violence, and detection by police
  - Harms defined as most important for the community members
- We need a source of information that describes the experiences, values, problems and solutions of people who gamble online
  - Reddit forum r/onlinegambling
  - Longitudinal, conversational, rich descriptions,
  - Users define both the perceived harms and the relevant prevention and remedies



# RESEARCH QUESTION

- Exploratory: What is the scope and nature of discussion on the r/onlinegambling thread?
  - What are the most common words?
  - Does sentiment affect word choice?
  - What types of posts receive the higher level of engagement?
  
- Thematic: What are users concerned about?
  - What are the potential harms?
  - How are those harms prevented or remedied?



# DATA AND ANALYSIS

- Data scraped from r/onlinegambling subreddit
  - Operation since Sept 6, 2008, currently roughly 24 000 subscribers
  - Posts: 1141, Comments: 9727(after cleaning)
  - Includes up and down votes, user “flare”, date, time, username, links to external files
- Textual data was prescreened for popular generic words, those reflective of reddit specific language, and words common in “bot” posts
- Sentiment analysis using Valence Aware Dictionary and sEntiment Reasoner (VADER) program
- Engagement analysis for posts: Engagement= votes (up or down) and responses



# SENTIMENT ANALYSIS

- Posts: Positive (68.5%), neutral (16.0%), and negative (15.4%)
- Comments: Positive (55.4%), neutral (24.9%), and negative (19.7%)
- Similarity across sentiments classification. Popular terms: Casino, site, game, gamble, deposit, withdrawal, Stake
- Positive unigrams reflect a focus on success: Win, bonus, paid,
- Neutral unigrams reflect a focus on specific practical advice: VPN, KYC, Crypto, bitcoin, Bovada
- Negative unigrams reflect concerns over operators: Illegal, scam, lose, \*expletives\*



# ENGAGEMENT ANALYSIS

- Highest engagement topic was “losses”
  - Keywords: loss, lost, down
  - Themes: commiseration, illegitimate operators, blameworthiness, advice
- Second highest engagement topic was “casinos”
  - Keywords: casino, Stake, rollbit, Bovada
  - Themes: recommendations for perceived legitimate operators
- Third highest engagement topic was “winning”
  - Keywords: win, cashed, won, jackpot, profit
  - Themes: congratulations,
- Fourth highest engagement topic was “advice”
  - Keywords: advice, tips, help
  - Themes: budgeting, avoiding termination, avoiding promotions



## DISCUSSION

- Forum activity focused largely on discussing where to gamble online and how to maintain leisurely gambling
- There were some harms as defined by users
  - Avoiding “scam” operators
  - Avoiding detection from operators when outside jurisdiction
  - Unsustainable play: profit orientation or predatory promotional practices
- Shades of Howard Becker: User community shared techniques for maintaining practice, avoiding detection from authorities and interpretation of experiences
- Use of stigmatizing language was present: someone exhibiting possible problems risked “psycho’ label





## DISCUSSION

- Online forums offer a source of information on the concerns and practices of users which is potentially useful in making language for preventative messaging
  - Also potential as a space to engaged in prevention messaging
- Online forums present a source of potentially harmful or misleading information for participants:
  - Overrepresentations of wins/profit discussion
  - “strategies” offered for games of pure chance (ex. roulette)
  - Stigmatizing language regarding problem gambling/mental health



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