Yuxuan Qiu

Project Proposal: Investigating Negotiation Strategies and Cooperation Dynamics in Competitive Cooperative Gameplay

**Introduction:**

Effective negotiation and cooperation are essential skills in both social interactions and strategic decision-making contexts. This study aims to explore how negotiation strategies and cooperation dynamics influence game outcomes in competitive cooperative gameplay settings. By examining these factors within the framework of social decision-making, we seek to enhance our understanding of human behavior in interactive gaming environments.

**Psychological Concept:**

The primary psychological concept under investigation is "Social Influence and Cooperation Dynamics in Strategic Decision-Making." This concept encompasses the examination of how social factors, such as group dynamics, communication patterns, and negotiation strategies, shape decision-making processes in competitive cooperative gameplay. Additionally, the Prisoner’s Dilemma serves as a complementary theoretical framework, illustrating the interplay between cooperation and self-interest in strategic interactions.

**Prisoner’s Dilemma:** The standard Prisoner’s Dilemma game (PDG) (8) is that both players simultaneously choose whether to trust each other, without knowledge of their partner’s choice. In the PDG, payoffs depend on the interaction of the two choices. The largest payoff to the player occurs when he or she defects and the partner cooperates, with the worst outcome when the decisions are reversed (player cooperates while partner defects). Cooperation yields a modest payoff to both players, whereas mutual defection provides a lesser amount to each.

<Https://www>-tandfonline-com.ezproxy.neu.edu/doi/ab… (n.d.-a). <https://www-tandfonline-com.ezproxy.neu.edu/doi/abs/10.5175/JSWE.2005.200300343>

**Hypothesis:** We hypothesize that players who adopt collaborative negotiation styles and effectively communicate with their fellow detectives will achieve higher scores and have a greater likelihood of winning the Murder Mystery Party game compared to those who adopt competitive negotiation styles or struggle to communicate effectively.

**Literature Review:**

**Social Decision-Making: Insights from Game Theory and Neuroscience:**

The article provides insights into the psychological concept of social decision-making, focusing on how individuals make choices in interactive social environments. It highlights the importance of factors such as fairness, trust, reciprocity, and strategic reasoning in decision-making processes. The research described in the article aligns with the proposed game design, which involves strategic decision-making, negotiation, and cooperation among players. Incorporating elements from game theory, such as the Prisoner’s Dilemma, can enhance the complexity of the game and provide opportunities to study social decision-making dynamics.

**Experimental Games and Social Decision Making:**

This article had provided valuable insights into social decision-making processes. "Experimental Games and Social Decision Making" (insert citation) discusses the application of experimental games to model situations where outcomes depend on individual and group choices. This article highlights advancements in experimental game design, focusing on repeated interactions, partner control through sanctioning, and partner selection for future interactions. Additionally, it explores the neurobiological underpinnings of cooperation and coordination, including social preferences, cooperative beliefs, emotion signaling, reputations, and indirect reciprocity. Emerging trends in psychology, economics, and neuroscience include investigating group heterogeneities, intergroup polarization, cross-cultural differences, and neurocomputational modeling of social preferences and beliefs.

**Game name: Murder Mystery Party**

The game used in this study is "Murder Mystery Party," a strategic card game where players take on the roles of detectives investigating a series of murder cases. Each player receives a unique mystery scenario and must use deduction, negotiation, and cooperation to solve the case. Throughout the game, players engage in strategic decision-making, form alliances, and negotiate with each other to achieve their objectives and maximize their scores.

**Methodological Plan:**

Pre-game Survey: Participants will complete a pre-game survey to collect demographic information (age, gender), gaming experience, and psychological variables related to negotiation strategies, cooperation preferences, and decision-making tendencies.

Game Observation: Researchers will observe participants' gameplay interactions, noting negotiation strategies, communication patterns, and cooperation dynamics.

Post-game Interview: After the game, participants will undergo semi-structured interviews to explore their experiences, decision-making processes, and perceptions of cooperation and competition in the game.

**Sampling Strategy:**

Convenience Sampling: Participants will be recruited based on their availability and interest in participating in the study.

Diversity Consideration: Efforts will be made to recruit participants from diverse backgrounds to ensure a broad range of perspectives and experiences.

**Conclusion:**

This study seeks to contribute to our understanding of negotiation strategies and cooperation dynamics in competitive cooperative gameplay. By integrating insights from social decision-making theory and experimental game design, we aim to shed light on the psychological mechanisms underlying strategic interactions in gaming environments. Ultimately, this research may have implications for the development of more effective negotiation and cooperation strategies in both gaming and real-world contexts.

Story:  
The Enigmatic Disappearance of the Reclusive Author:

In a secluded mansion nestled in the woods, a reclusive author vanishes without a trace on the eve of her book launch. Her lifeless body is discovered floating in the murky waters of the estate's pond, surrounded by the remnants of torn manuscripts and broken quills. Strange symbols and cryptic messages are discovered scrawled across the walls of her study, hinting at a secret society and a hidden manuscript. Players must unravel the mystery, delving into themes of secrecy, hidden agendas, and clandestine organizations.

Main Card: Chamber

Side Card: Borrowed Animal

The Sinister Slaying in the Foggy Alley:

In the dimly lit streets of Victorian London, the body of a prominent businessman, Mr. Reginald, is discovered, brutally stabbed, in a foggy alley. With the haunting echo of footsteps fading into the mist, detectives must navigate the labyrinth of the city’s underworld to unmask the killer.

Main Card: Sharp Weapons

Side Card: Homicide at a Distance

The Tragic Fall of the Illustrious Acrobat:

Background: Alessandro, the star acrobat of the renowned circus troupe, met his demise during a daring high-wire act. While performing his signature somersault, tragedy struck as the safety harness failed, sending him plummeting to the ground in front of a horrified audience.

Main Card: Machine

Side Card: Accidental Death

The Enigmatic Poisoning at the Annual Garden Party:

Background: Lady Penelope, the esteemed hostess of the annual Garden Society gala, succumbed to a sudden and mysterious illness after sipping from her champagne flute. As the festivities came to a halt, suspicions arose among the guests gathered in the opulent garden setting.

Main Card: Asphyxiation

HYQ : 2 WIN FIRST +1

ZUOZUO: 1 WIN

KAI: 2 WIN FIRST

Girl : 1 WIN FIRST + 1 +1

BARRY: 3WIN FIRST +1 +1 + 1 + 3

HYQ : 1 4 WIN 1

ZUOZUO: 1 1WIN 1 +3

KAI: 2 1WIN 1 +3

Girl : 3 1WIN +1 +1

BARRY: 6 2WIN 1 +1 + 3

HYQ : 2 2 WIN +1

ZUOZUO: 5 2WIN +1 +1 + 3

KAI: 5 1 WIN +1 + 3

Girl : 5 2WIN +1 + 1 + 3

BARRY: 11 2 WIN +1

HYQ : 4

ZUOZUO: 10

KAI: 9

Girl : 10

BARRY: 12