Eggplace

EA agent competition on social media

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The Environment: Eggplace

- **Villeville**: population 110
- **Issue**: Ban new egg farms from being opened?
- **The campaign**:
  - 10-day discussion on Eggplace
  - At end of 10th day, a vote is held
  - >60% of votes required to pass a ban
- **The actors**:
  1. Common users (100)
  2. Egg Conspirators (5)
  3. Anti conspirators (5)

The Actors: Common Users

- Voting base for the population
- Three types:
  1. Active users (20%)
  2. Moderately active users (30%)
  3. Passive users (50%)
- Actions:
  - Post, read post, like post, vote
- Vote leaning:
  - Exposure to posts based on individual preferences

```
Preferences = {
        ethos: impact_factor,
        pathos: impact_factor
        logos: impact_factor
        tone: tone_category
        }

Post impact = preference factors * post characteristics

New leaning = current leaning + post impact

Vote =  if leaning > 0.55:
            vote yes
        if leaning < 0.4:
            vote no
        else:
            abstain
```

The Actors: Egg Conspirators

- Current egg farm owners
- **Goal**: influence voters to support ban
- **Actions:**
  - Post, like post, survey post impact, update strategy
- **Strategy:**
  - Make one post a day, based on post characteristics strategy
  - Genetic algorithm on post characteristics
    1. Random initial assignment
    2. Strongest impact post across all conspirator agents is assigned new base at start of day
    3. Random mutations applied to each factor on all replicating agents
    4. Unique: bonus impact on active users

Post characteristics = {
ethos: post_factor,
pathos: post_factor
logos: post_factor
tone: post_tone
}

Post Impact = ∑ impact on every viewing user
+ active user bonus

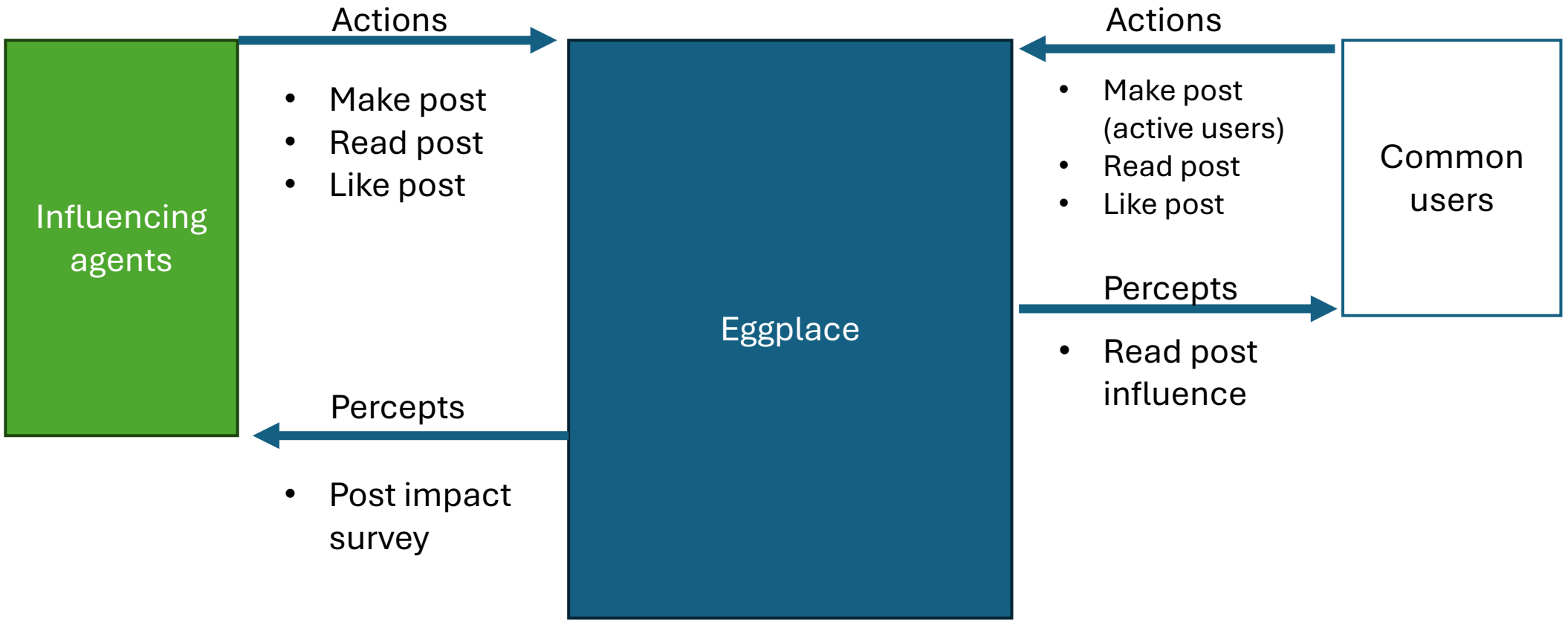
The Actors: Anti Conspirators

- Country club diners disgusted by conspiracy
- **Goal**: counteract conspirator influence
- **Actions:**
  - Post, like post, survey post impact, update strategy
- **Strategy:**
  - Make one post a day, based on post characteristics strategy
  - Genetic algorithm on post characteristics
    1. Random initial assignment
    2. Strongest impact post across all conspirator agents is assigned new base at start of day
    3. Random mutations applied to each factor on all replicating agents

Post characteristics = {
ethos: post_factor,
pathos: post_factor
logos: post_factor
tone: post_tone
}

Post Impact = ∑ impact on every viewing user

The Actors


Actions
Influencing agents
Make post
Read post
Like post
Eggplace
Actions
Make post (active users)
Read post
Like post
Common users
Percepts
Read post influence
Percepts
Post impact survey

The simulation

- Day 1:
  - Simulation starts
- Days 2-4:
  - Agents start becoming polazired
  - Average leaning stays near the center
- Days 5-6:
  - Anticonspirators determine the optimal strategy
  - Heavy pro-ban leaning users become less confident
  - Partisan active users start to post

The simulation

- Day 7-9:
  - Anticonspirators continue to influence middle-leaning users
  - Anti-ban partisan active users solidly outnumber pro-ban users
  - Conspiracy users adopt the optimal strategy, but are unable to counteract anticonspirator influence
- Days 10:
  - Votes:
    - 28 pro-ban
    - 54 anti-ban
    - 18 abstentions
  - Result:
    - Anticonspirators win

Appendix

- View simulation feeds:
  - https://poul-request.github.io/ia_term_project/