Prisoner’s Dilemma Game Documentation

Simulation and Serious Games

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Research sources:

The Evolution of Trust by Nicky Case <http://ncase.me/trust/>

https://www.investopedia.com/terms/p/prisoners-dilemma.asp

Design process and testing:

For the game, we decided to use a format that would allow constant replayability to learn the outcomes easier. The classic example of the prisoner’s dilemma didn’t allow for that, so we instead mimicked the mechanics of “The Evolution of Trust” in which you contribute coins and receive (or don’t receive) coins based on whether the other player contributed coins as well. This allows the player to see a running tally of whether or not their actions benefitted them. For example, they can learn by playing the game that if they don’t know what their opponent will do (random AI), choosing not to contribute every single time will usually end up in their favor.

We added different behaviors for the AI so the player can do more experimentation with the outcomes, such as finding out what happens if they play with someone who always contributes. This should aid in understanding a lot. The only downside of all these features is that it might take more than 3 minutes to get a full understanding, since the player has a lot of different options available to them.

For the testing of understanding, we decided to stick with the classic prisoner’s dilemma case. Since the player can play the coin examples directly, asking them questions about that would be a little too easy; asking them to apply the logic to a different scenario will test their actual understanding of the concept.