Introduction to Computational Social Science assignment 7:

Computerized social experiments – How a competitive environment changes the behavior of youngsters?

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This paper is about describing how I would run a digitalized experiment to gain more knowledge on how kids, teenagers, and other people behave (and interact) when they are put under competitive pressure. The methods I use are practical: I really would force as many people into a competitive environment as possible, but also observe these people when they are in a "natural habitat", at least as much as possible.

The experiment would be designed in a little bit of a hacky way. See, how does one define who are youngsters? Well, to answer this question, we need to see how I would observe differences between behavior when in and not in a competitive environment.

To see people in competitive environments, I would create competitive games. It's hard to measure how intense do players find a game, therefore I think of creating many different games that are comparable to each other in intensity, but the comparison would result in a clear intensity-hierarchy between the games. (In practice, I could imagine let's say an action game, where I release 10 different versions, say Game 1 to 10, the higher the number, the more focus, fast reaction-time, composure, attention on the small details a game requires in order to succeed like win matches, but the games would be pretty much the same, only difference is in "parameter-settings"). I support this idea also because ideally, the more platforms and games we create, the more players, and therefore datapoints we have. So on top of that, to measure more generally behavior in competitive games, I would try to create other types of game series too, such as sports games, MOBAs, etc. to see what change in behavior is more general, and the differences between domains.

Now that we have the environment, let's figure out who will be the participants. Simply put, anybody that downloads our games and plays them. I would feel too much responsibility storing one's personal data such as age, therefore, here is the "hack": I just assume that the players who play our games are mostly young people. The answer to the question then is: I don't define youngsters. I just assume that a high percentage of the people who play our games is regarded as a young person with "a whole life ahead of him/her". To better increase the chances of having a young community of gamers, the games would be targeted/marketed to teenagers and kids. Occasionally, I would put out surveys asking the playerbase to voluntarily tell honest information about themselves such as age, to check if really our playerbase is mostly young people. Those who are not, are assumed to be too small minority to change the results. (This is what I expect and don't plan to "think otherwise" as it's a bet that either works or doesn't, if I really face that we have a relatively old playerbase, I would probably redesign the experiment to really only focus on young players and either "predict" (with machine learning) who is likely to be a kid/teenager or actually ask for age, or give up with this idea and rephase to question from "… youngsters" to whatever age bracket I find fitting.)

The most untrivial and probably most important part is the method of measuring changes in behavior. Since I like to first take little steps to get initial results guiding into correct directions, at first I would implement a basic model to measure behavior in any environment. The core idea is that we would use this to measure behavior in a match, where a player is under competitive pressure, and use this when they are just in the lobby, or waiting, or in a phase where their decision-making is of less relevance and not in a need to hurry. I imagine actually implementing two phases in games, one “calm”, non-competitive part, and one highly competitive part, and see what this change causes in players, and how they behave afterwards. (One very interesting research would be to see how after players “turned into their competitive self”, how the interactions they make further change their behavior, do those make them even more hungry to succeed and be hastier?) We still need to describe how we will measure behavior in any environment. The simplest, initial model I think of is text and speech analysis (could firstly quickly implement a sentiment analysis) on the messages they send to teammates, and also some performance measures: do they play “better” because they are more focused or make more mistakes, and even physical measures, such as: do players click more, move more? If this research turns out to be promising, we could ask some players to voluntarily let us turn on their cameras at random times (when they don’t expect it, so they don’t feel like being watched) and can analyze their behavior with image detection. Of course, this would be very complicated, but could potentially yield to more interesting results, as we could more objectively find that players tend to get angrier or something whilst under pressure.

Lastly, to generalize and see trends in our analysis, we have to do this on all different intensity games, and all different types of games. We could see trends such as a little increase in intensity in “simpler” games lead to big amount of pressure, but in intense games they may even reverse the effect. This is a speculation, that I expect. In the end, I would expect to find that mildly intense games can drive some people crazy and it also depends on the type of game (I expect more aggression from players playing action games, or where a little change (like scoring a goal) can change the outcome of the result massively), and that very intense games make players more unreasonable and selfish.

Note: I did not use any LLM/GenAI tools.