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1) Have any data been collected for this study already?

No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?

How is social affective information organized and clustered in memory as indexed by memory intrusions? We test this using a social learning game where participants first learn positive and negative reputations of virtual players and then learn biographic information (bioinformation) that they are quizzed on. We will test whether intrusions of bioinformation occur more or less for positive or negative players. We also test how robust this effect may be across three repeated presentations and quizzes of the information. In other words, how does affective information organization change with learning.

3) Describe the key dependent variable(s) specifying how they will be measured.

The main dependent variable are the choices made in a 4-choice biographic memory task. There are three pieces of biographic information (name, favorite animal, state born in). The choices in the memory task will be: correct answer, incorrect foil of the same reputation and same gender (our error of interest), incorrect foil of the opposite reputation and same gender, incorrect novel foil.

4) How many and which conditions will participants be assigned to?

All conditions will be within-subject manipulations of the virtual players, 2 Reputation (good, bad) x 2 Gender (male, female). There are 5 males and 5 females per reputation condition (n = 20 players). Good players cooperate 80% of the time and bad players 20% of the time. There are 3 pieces of information per player to test in the memory task. Finally, they complete categorization trials for the reputation of the players.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.

The different types of intrusions/errors will be counted per participant and per information repetition and be turned into a proportion of total choices made that represent each type of intrusion to take into account other errors. These proportions will be used in linear mixed regressions where valence (factor), reputation (continuous), their interaction (and possibly gender) will be fixed effects. They will also be allowed to vary as random slopes by participant and random intercepts will be allowed to vary by biographical information. Signal detection metrics (e.g., a and d prime and beta) may also be estimated and compared.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

We will exclude participants with poor reputation learning (no difference between point learning between positive/negative players or improbable point earning patterns – negative slope with positive players or positive slope with negative players) or memory performance (< 70%). However, they may still be used for the memory moderator analysis detailed below.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.

Sample size was determined using Monte Carlo sampling on simulated data from a mixed effect linear model conditional on a hypothesized prediction. Simulations show that 35 participants should get 80% power given the assumptions in the model. However, to provide some leeway in case the assumptions are incorrect, we will aim at 60 participants as that should provide >95% power.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

We will index reputation learning in two ways: 1) during the task by the points they won against each player as they played iteratively and 2) categorizing memory test using the players from the initial game. If there are enough categorization or learning deficits, we may use these as moderators for the intrusion effect (i.e., is explicit declarative memory necessary for the predicted memory intrusions or can they occur simply as the result of memory organization). We may examine whether there are gender asymmetries in memory intrusions that depend on participant gender, however this is mainly exploratory. Intrusions may also be indexed by raw intrusion counts.