Supplemental Materials

When Individual Goal Pursuit Turns Competitive: How We Sabotage and Coast

By S. Huang et al.

This supplement contains additional methodological details and a replication of Study 3B conducted in China.

Additional Methodological Details

Study 1

Pairing instructions. Participants completed the study from a computer station in the lab, following instructions from the survey software. The instructions read, “Thank you for participating in this partner task! Please enter a few demographics about yourself so that we can match you with a similar partner.” They indicated their gender, age, and initials. After viewing a loading screen (with an animated image indicating that the page was loading) for several seconds, participants were shown the information about their purported partner, who was the same gender, one year older, with the initials SMM. To enhance credibility of the existence of their partner, participants read, “Depending on what condition you are assigned to, you may or may not be communicating with your partner through messages online. To make sure the message system is working, we will have you and your partner send a message to one another. Please write a quick message below and move on to receive your message from SMM.” After writing a message, they then clicked to move to another loading screen that read “waiting for message from partner,” which then automatically advanced to the next screen after several seconds to display a hyperlink that read “READ MESSAGE.” Upon clicking the link, participants read a message ostensibly from their partner: “testing 123 . . . I wonder what we’re gonna do.” They were then asked to indicate whether they could read the message from their partner (yes/no), to complete the cover story.

Design of scoring system. Participants read that each word was worth points, and that longer words were worth more points, and therefore they should try to think of both short and long words. We purposefully kept the scoring system vague such that scores would seem plausible for any reasonable set of answers given by participants, and that participants would have to rely on our feedback to assess their progress. Each set of letter strings we selected had many possible answers (“DVLOREA,” “HESTOMR,” “EINELFG,” and “EPEHALP”). In addition, as participants were not given feedback after every single round, we minimized any possible suspicion about how the scores may have progressed (e.g., if participants felt that they had done better in one round than another, it would not be clear how each round contributed to their current score).

Sabotage choice. To emphasize the impact the participants’ choice would have, participants read, “The test SMM takes WILL BE one of the three questions you select now. You will see difficulty ratings (based on the number and difficulty of word combinations possible) that are provided to help you make your decision below. Keep in mind that your partner will likely do better on the task if easier questions are chosen.” Thus, it was made explicit that easier
letter strings would lead to better performance for the paired student; the difficulty of letter strings selected for the paired student hence reflected competitive behavior and served as our measure of sabotage in this study (i.e., to pull the other student down in performance).

Below is the screenshot of the choice page:

![Choice Page](image)

**Study 2**

**Pairing instructions.** Participants first indicated their gender, age, ethnicity, and leisure activities. They then read, “Some tasks or surveys in the session today may require that you work remotely with a partner. Therefore, we’ll now select a partner for you, whom you will interact with in case those tasks/surveys are allocated to you.” After waiting a few moments on a loading screen to be paired with a partner, they viewed a screen that read “Thank you for your patience. Please click NEXT to view the profile of your assigned partner.” Upon clicking the Next button, they viewed a profile of a student (Computer #KDX7) who had the same gender and age, worked at a department store, and whose leisure activities included movies, listening to live music, and trying new restaurants.

**Design of scoring system.** In this study, we allowed participants to see the cards’ numbers to mimic online card games in the real world. Importantly, we kept the connection between the cards’ points and our score feedback vague, such that participants could not simply add up the points on the cards to derive their score; they had to rely on our score feedback to gauge how close they actually were to their ultimate 100-point game goal for the reward. This design was based on the rationale that participants in this subject pool are accustomed to video
games where points are usually allocated based on a multitude of variables that cannot easily be tracked.

**Sabotage choice.** Participants read that they would enter a bonus round to play a different game to earn more points toward their 100-point goal. They read, “To fully test all the algorithms developed for this game, once you choose a version to load, you’ll play the game under Algorithm A, while your partner Computer #KDX7 plays the same game under Algorithm B.” Thus, it was clear that they would be choosing both their own and their partner’s game, with no expectation of reciprocation from the partner or misunderstanding that someone else might be choosing which game they would play.

Below is the screenshot of the choice page:

*We have provided the average output below for your reference. Based on market pre-tests, they are all pretty fun to play!*

**Study 3**

**Pairing instructions.** Participants read, “Some games in the session today may require that you work remotely with a partner from other academic institutions. Therefore, we’ll now select a partner for you, whom you will interact with in case those games are allocated to you.” They again waited for the computer to ostensibly pair them with another student (Participant #07) who was the same age, gender, and major as the participant, and who was at the same academic institution as the participant. We again varied the leisure activities (i.e., Participant #07 liked movies, listening to live music, and trying new restaurants) to enhance credibility of the partner.

**Design of scoring system.** Similar to Study 1, because participants were not informed of their score after each round, they did not know how their work in each round contributed to their score; they only knew that the total amount of work they put in led to the total score they had.
Sabotage choice. Below is the screenshot of the choice page:

You may earn or lose a few points by playing these dice games; we’ve provided the average output from previous players below for your reference.

**Dice Game Set A**
- **Blue Dice Game** (your game):
  - Average output = +5 points.
- **Red Dice Game** (Participant #07’s game):
  - Average output = -5 points.

**Dice Game Set B**
- **Square Dice Game** (your game):
  - Average output = +10 points.
- **Triangle Dice Game** (Participant #07’s game):
  - Average output = +20 points.

Study 3B replication in China

Method

This study employed a 2 (Progress Level: low vs. high) × 2 (Attainment Certainty: high vs. natural) between-subjects design. A total of 199 college and graduate students in China participated in this study (70 male; \( M_{age} = 20.34, SD = 1.90, \text{Median} = 20 \)). The sample size was smaller than Study 3B due to constraints on subject availability. The study procedure and details followed Study 3B.

Results

**Sabotage.** We again used a logistic regression model to analyze the impact of progress level, attainment certainty, and their interaction on participants’ tendency to sabotage (i.e., choice of game version 1). The analysis revealed a main effect of progress, \( B = .59, SE = .21, p = .006 \); consistent with prior studies, participants were more likely to sabotage when they had reached a high level (60.4%) than a low level of progress (44.9%). There was also a main effect of attainment certainty, \( B = .71, SE = .30, p = .017 \), such that those who had an external verification of goal attainment certainty were more likely to sabotage (60.8%) than those in the natural conditions (44.3%). We further observed a marginal Progress Level × Attainment Certainty interaction, \( B = -.51, SE = .30, p = .085 \).

We followed the procedures in Studies 3A and 3B to decompose this marginal
interaction. When there was no additional information on certainty, participants were more likely to sabotage when they had made high progress (67.4%) than when they had made low progress (32.6%), $B = -1.19$, $SE = .43$, $p = .006$, again replicating prior studies. However, when attainment certainty was directly manipulated to be high, there was no significant difference in sabotage behavior between the high (51.6%) and low progress (48.4%) conditions, $B = .15$, $SE = .41$, $p = .685$.

Looking at the interaction another way, among the participants who had made high progress, those who were informed of a high certainty of reaching their goal sabotaged about the same as those who were not given additional information about attainment certainty, $B = -.20$, $SE = .41$, $p = .626$. However, when participants had made low progress, those who were informed of the high certainty of goal attainment sabotaged more than those who did not have this information, $B = -1.21$, $SE = .43$, $p = .005$ (means reported above).

Coasting. We again found a significant effect of sabotage on subsequent effort, $B = -444.4$, $SE = 177.7$, $p = .01$. Participants who sabotaged were less motivated to gain points toward their own goal ($M = 128.38$ seconds, $SD = 535.18$) than those who did not sabotage ($M = 572.83$ seconds, $SD = 1731.60$).

From progress, to sabotage, to coasting. To connect the two sets of results, we followed the same procedures to examine whether the effect of goal progress on motivation was mediated by sabotage choice, and whether this mediational path differed in the high- versus natural-certainty conditions. Although this moderated mediation was not significant, 95% CI = $[-304.79, 54.39]$, we tested the indirect effects within the natural-certainty and high-certainty conditions, respectively, as in Studies 3A and 3B. In the natural-certainty conditions, the effect of goal progress on motivation was again significantly mediated by sabotage $[-130.55, -297.72]$, such that people sabotaged more when they neared the end of their individual goal, resulting in coasting afterward. However, when certainty was externally manipulated to be high regardless of progress level, consistent with the findings in Study 3B, the mediational path from progress to motivation through sabotage was no longer significant $[-135.37, 90.50]$. 