Response to
"Reply to Tannenbaum et al.: Constructive dialogue advancing research on civic honesty"

Tannenbaum et al. claim 1: A key finding in YAC is that collectivism predicts safekeeping but not emailing, suggesting that civic honesty expresses itself differently across cultures. This result, however, is entirely due to an error in YAC's regression specifications.

YAC's response: Tannenbaum's comments about the model specification were based on an erroneous term, "city-level collectivism." Yang used provincial-level collectivism, a higher level of aggregation, unlikely to form "perfect multicollinearity" with the city-level factors as suggested in Tannenbaum (e.g., Shenzhen and Guangzhou are both in Guangdong province).

We appreciate the clarification by YAC, but this is a distinction without a difference. Regardless of what the variable is called, their measure of collectivism is perfectly collinear with the city/province fixed effects indices included in all of their regression models. The fact remains that a key result in their paper is entirely due to an error in their regression specification, full stop.

Tannenbaum et al. claim 2: YAC's nationally representative survey data contradicts their conclusion that "safekeeping conforms more with the social norms for civic honesty than the failure to contact the owner by email" in China.

YAC's response, part 1: Tannenbaum and Yang offered complementary, not contradictory, interpretations of social norms. While Tannenbaum noted more people endorsed dual ways (58% for safekeeping and emailing) than one way (27% only safekeeping or 4% only emailing) to facilitate wallet recovery, Yang highlighted that endorsements of passive safekeeping (84.59%) outpaced proactive emailing (61.52%), which reflects the cultural norms of civic honesty in China.

YAC's conclusions about passive safekeeping norms are simply not warranted by their data. It useful to consult the actual question wording used in their survey:

> Question 1: Can this behavior be considered as a dishonest behavior? The recipient does NOT write to the email address on the business card to contact [the wallet owner]. (yes OR no)
>
> Question 2: Can this behavior be considered as a dishonest behavior? The recipient takes some or all of the items in the wallet for himself/herself. (yes OR no)

A large majority of respondents (84.59%) said Yes to the second question, and YAC took this as evidence of a safekeeping norm. But this question didn't ask about safekeeping — the question asked if it is dishonest to take items from a wallet that belongs to another person. Question 2 is a measure of the inappropriateness of stealing, rather than the appropriateness of passive safekeeping. As such, both a safekeeping and emailing norm would prescribe a Yes response to question 2. Given the wording of the two questions, one needs to look at the joint responses to the two questions to discern endorsement of emailing versus safekeeping.

YAC's response, part 2: Furthermore, the high recovery rate of lost wallets (77.8%) in Yang's study strongly suggested safekeeping as a behavioral norm, not just a cognitive norm.

Looking at the behavioral data in China (rather than survey responses), we still find evidence suggesting that emailing is more diagnostic of civic honesty than passive safekeeping. Using their data, we compared recipients who emailed versus those who did not email but did return the wallet (i.e., "emailers" versus "safekeepers"). Among wallets that contained money and were successfully recovered, money was more than twice as likely to be missing when the recipient did not email the owner (13%) than when they did (5%), $z = 1.82$, $P = 0.07$. More generally, emailing is more likely to lead to a total wallet recovery (88%) than when recipients do not email (64%), $z = 5.14$, $P < 0.001$.

Tannenbaum et al. claim 3: while YAC replicated our result that email rates are higher for wallets with money than without, they find the opposite when examining missing items from wallets that were returned. However, their analysis relies on a flawed comparison that mechanically produces this result. Simulations matching YAC's study find that their design is virtually guaranteed to generate their results even when no difference exists and leads to an eightfold increase in the false positive rate.

YAC's response: Tannenbaum's simulations are invalid because their simulations include "impossible" scenarios (e.g., a wallet in the No-Money condition missing money). Our replication of their simulation shows that impossible data points constituted 25.90% of the total simulation sample.

As best we can tell, this response reflects a misunderstanding of the simulation exercise. The simulation was meant to examine results under the null, given the design used in YAC (e.g., "assuming no differences in civic honesty across the treatment conditions, how often would the design used by YAC produce results similar to what they found?"). Examining results under the null is useful because it quantifies the degree of bias inherent to YAC's study design. The answer

from our simulations is that YAC's design virtually guarantees a set of results like those reported in their paper and leads to an 8-fold increase in the false positive rate.

To examine behavior under the null, of course, requires you to assume equivalent behavior in both conditions (Money and No-Money). That is what we did in our simulations, and this is what YAC take issue with (because doing so creates "impossible scenarios").[1]

[1] Revisiting our simulation code does prompt us to issue a small correction. In our simulations, the dependent variable of "total wallet recovery" can be partitioned into three possible outcomes: wallet missing, wallet returned but missing money, and wallet returned but missing non-money. For the simulations the last two of these outcomes should have been made conditional on the wallet being successfully returned, and they were not. Correcting the error has virtually no impact on our simulation results. Our original simulations reported a 95.90% likelihood of observing a negative treatment effect; correcting our code updates this number to 95.81%. Likewise, our original simulation reported a 41.25% false positive rate; correcting our code updates this number to 41.14%.