Supplementary Materials for

Perceptions of collaborations:

How many cooks seem to spoil the broth?

Supplementary Study: Exploring preferences for group size

*Method*

We began by creating a 25-item list of different tasks, grouped into five broad domains: writing, design, creativity, consumer goods, and problem solving. Five sets of items were created, with each set consisting of one item from each of the five domains. These different sets comprised the five conditions in this study (see Table 1 for items).

Using Amazon’s Mechanical Turk platform, we recruited 250 participants (and received 229; *Mage* = 36.6 years, *SD* = 11.7 years, 50.2% male) to participate in exchange for a small monetary reward. Participants were told they were taking part in a study about “perceptions of collaborations” and would be asked to report what they believed to be the optimal number of collaborators for a number of different tasks. Following this, participants (via random assignment) considered one of the five-item sets. The set was presented in the following general format, “What do you think would be the optimal number of *X* to do *Y*?”, where *X* was replaced with task-specific descriptors of collaborators (e.g., authors, mechanics) and *Y* was replaced with specific tasks (e.g. writing a novel, designing a bicycle). Three response options were available for each item: just one, some specific number (followed by a blank text box in which to enter a whole number), or as many as possible. After responding for all five tasks, participants provided basic demographic information and were thanked and debriefed. This design and the analysis that follows were conducted as specified in our preregistration of this study (https://aspredicted.org/blind.php?x=jg8rf9).

*Results and discussion*

 Our objective with this exploratory study was to note the extent to which responses exhibited variability in the reported ideal number of collaborators for different tasks. As summarized in Table 1, we noted both the distribution of responses across the three options (just one, some specific number, as many as possible) for each task as well as the average and standard deviation of, among those choosing this option, the specific number between one and infinity. Consistent with the notion of creative authenticity (Valsesia et al., 2015), nine tasks received a majority response of ‘just one’ (e.g., song, poem, painting). Only one task (solving an equation) received a majority response of ‘as many as possible,’ providing preliminary evidence that larger groups are not always believed to be superior. For the remaining 15 tasks, the majority of participants entered their own integer as the optimal group size.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Just one (%) | As many as possible (%) | Specific number (%) | Specific number mean | Specific number SD |
| 1. Textbook authors | 28.9 | 17.8 | 53.3 | 8.46 | 23.82 |
| 2. Movie writers | 23.4 | 14.9 | 61.7 | 4.34 | 3.75 |
| 3. TV episode writers\* | 11.1 | 15.6 | 73.3 | 4.39 | 2.32 |
| 4. Song lyricists | 51.1 | 6.7 | 42.2 | 3.21 | 1.90 |
| 5. Poets writing a poem | 85.1 | 4.3 | 10.6 | 3.75 | 0.96 |
|  |  |  |  |  |  |
| 1. Car designers\* | 11.1 | 35.6 | 53.3 | 8.46 | 6.25 |
| 2. Bridge architects\* | 14.9 | 21.3 | 63.8 | 4.76 | 3.73 |
| 3. Bicycle design engineers | 35.6 | 20.0 | 44.4 | 3.15 | 1.04 |
| 4. Watch design watchmakers | 51.1 | 13.3 | 35.6 | 5.13 | 3.96 |
| 5. App design programmers\* | 10.6 | 27.7 | 61.7 | 5.38 | 4.69 |
|  |  |  |  |  |  |
| 1. TV commercial advertisers | 26.7 | 28.9 | 44.4 | 6.90 | 10.46 |
| 2. Billboard ad advertisers | 46.8 | 19.1 | 34.0 | 3.73 | 2.15 |
| 3. Research project scientists\* | 4.4 | 37.8 | 57.8 | 7.54 | 13.08 |
| 4. Painting artists | 88.9 | 4.4 | 6.7 | 6.67 | 7.23 |
| 5. Dance routine choreographers | 59.6 | 8.5 | 31.9 | 3.36 | 2.92 |
|  |  |  |  |  |  |
| 1. Food dish chefs | 75.6 | 6.7 | 17.8 | 2.75 | 1.28 |
| 2. Beer brewers | 34.0 | 27.7 | 38.3 | 4.24 | 2.11 |
| 3. Jacket designers | 73.3 | 4.4 | 22.2 | 3.90 | 2.77 |
| 4. Chewing gum brands | 31.1 | 26.7 | 42.2 | 6.44 | 5.54 |
| 5. Laundry detergent brands | 38.3 | 25.5 | 36.2 | 6.65 | 6.33 |
|  |  |  |  |  |  |
| 1. Brainstorming employees | 2.2 | 44.4 | 53.3 | 10.54 | 6.39 |
| 2. Law legislators | 2.1 | 40.4 | 57.4 | 30.15 | 36.85 |
| 3. Sport technique coaches\* | 17.8 | 22.2 | 60.0 | 9.41 | 28.81 |
| 4. Proof solution mathematicians | 20.0 | 53.3 | 26.7 | 6.08 | 5.82 |
| 5. Fire escape planners\* | 14.9 | 25.5 | 59.6 | 5.82 | 8.83 |

**Table 1**. Tasks from the exploratory study blocked by domain. The blocked domains reflect tasks related to writing, design, creativity, consumer goods, and problem solving. Items denoted by the same number were included in the same set. Items denoted with an asterisk (\*) were used in Study 1.