Overconfidence and Entry Into Competitions: Reconciling Discrepant Results

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In this paper, we attempt to reconcile two discrepant findings: (1) people typically think they are better than average at most things they do and (2) recent laboratory studies find underconfidence on many tasks, especially difficult ones. Our reconciliation focuses on self-selection and argues that people naturally choose tasks on which they believe they are better than others. If we focus on tasks people have chosen, we observe that, on average, people think they are better than average.

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SPECIAL SESSION SUMMARY
On Being Better (or Worse) Than Others: Illuminating and Eliminating Biases in Social Comparison
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SESSION OVERVIEW
Consumers make sense of their place in the world by comparing themselves to those around them. But as research in social comparison illustrates, these comparisons are typically rife with systematic biases—biases with documented effects on consumers’ product choices (Burson 2007), health risk perception (Raghubits and Menon 1998), and shopping behavior (Moorman et al. 2004). In the vast majority of documented cases, people believe they are better than others (summarized in Dunning, Heath, and Suls 2004), and on some rarer occasions, they believe they are worse than others (Kruger 1999; Moore 2007). In general, people tend to believe they are better than average on easy tasks and worse than average on difficult tasks (Kruger 1999; Moore and Healy 2008).

Each of the papers in this special session examines better-than-average and worse-than-average effects in consumer judgments to collectively (a) further clarify the mechanism behind these biases, (b) illustrate ways of overcoming them, and (c) demonstrate the impact of such biases on real decisions.

The first paper by Menon, Kyung, and Agrawal examines how perceived similarity between self and others in an unrelated domain can influence social comparison judgments. The studies illustrate the role that perceived controllability over outcomes can play in determining whether people believe they are better or worse than average, and how increasing perceived similarity between self and other—versus changing the target of comparison as in previous work—attenuates both biases. However, when motivating people to act, attenuating these biases is not always desirable.

Building on this theme of considering similarities between self and others, the second paper by Gershoff and Burson examines the flawed assumptions about the distribution of reference groups. The studies demonstrate that people consider the characteristics of others when making judgments, but that people tend to overestimate the dispersion of that distribution of others. This error can result in both better-than-average and worse-than-average effects, which have been shown to influence consumption decisions. Furthermore, simple manipulations of scale granularity or exemplar availability can influence the construction of these distributions, serving to magnify or attenuate these biases when making judgments.

The third paper by Cain, Moore, and Chen investigates the generalizability of some of these effects and examines why we tend to see a prevalence of overconfidence in the real world when underconfidence is also demonstrated in laboratory studies. Focusing on self-selection, they find that people tend to choose to participate in tasks where they believe they are better than others. When choosing to participate in tournaments involving real money, people were more likely to opt to participate when the task was easy versus difficult, even though their odds of winning were the same for tasks of both types. Imperfect information about self and others drives this effect.

Thus this special session examines different antecedents and consequences of better-than-average and worse-than-average effects in consumer contexts. The first paper examines consumer motivation to act while the second investigates performance and usage estimates and the third evaluates market entry decisions. These papers and the discussion that follows can raise interesting theoretical questions such as: What is the underlying mechanism behind these biases? When and why do they occur in the “real world”? How can they be attenuated? Is it always desirable to do so?

In short, we aim to discuss both theoretical insights and practical applications that stem from social comparison and related theories to deepen our understanding of when and why these biases occur and how to improve consumer decision making.

EXTENDED ABSTRACTS
“Biases in Social Comparisons: Optimism or Pessimism?”
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The tendency for people to be comparatively optimistic or pessimistic about themselves, to the point of being unrealistic, has been well-documented. But under what circumstances do these better-than-average and worse-than-average biases occur? Recent work suggests that for easy tasks, people believe they are better than average and for difficult tasks they believe they are worse than average (Moore and Healy 2008). We deliver further into understanding this dichotomous bias by examining specifically how beliefs about one’s own perceived control over an outcome and inferences about an other’s can influence whether a better versus worse than average bias manifests. We also illustrate that merely increasing perceived similarity between self and others in an unrelated domain can attenuate both of these biases and when it might (or might not) be desirable to do so.

In a series of four studies, we show the following: (a) Better than average effects are likely to occur when one perceives more control over the outcome and worse than average effects are likely to occur when one perceives less control over the outcome; (b) Both these biases can be attenuated by increasing perceptions of similarity between oneself and a comparison target person (e.g., the average undergraduate) in an unrelated domain; (c) The mechanism for these effects is a change in perception of one’s own control in a domain and not a change in perception of another person’s control; (d) Under specific conditions, people are motivated to work harder in order to attain a positive outcome, thus helping managers and educators to provide the right work environment and means to do better and succeed. We illustrate these effects while controlling for outcome valence (positive outcomes), comparison target (average undergraduate at the school), as well as event domain (kept constant in each study) unlike previous research that varies these constructs to demonstrate these biases.

In Study 1, participants were asked to think of a course important to them and presented them with two grading scheme scenarios—one in which the outcome was highly controllable (e.g. final exam based primarily on class lectures) and one in which it was less so (e.g. final exam based primarily on ability to apply material to real world situations). They then rated the likelihood that they and the average undergraduate at the school were likely to get a good grade in the course (employing indirect comparative measures) and the extent to which getting a good grade in the course was in their control. The results revealed that in situations of high control, a better-than-average bias manifests while in situations of low control, a worse-than-average bias manifests. Additionally, percep-
tions of one’s own control vary by situational context while those of the average undergraduate do not.

In Studies 2a and 2b, we examined the attenuating effect of perceived similarity between the self and the target other on these two biases. Rather than varying the target to be more or less similar to the self as in many previous studies, participants were all asked to think about the average undergraduate and consider either ways in which they were similar or different. Similar to Study 1, results indicate that better-than-average biases manifest in situations of higher control (Study 2a: trivia contest on pop culture) and worse-than-average biases manifest in situations of lower control (Study 2b: raffle). More importantly, we find that an increased in perceived similarity, even when the comparison target is kept constant, attenuates both biases.

In Study 3, we employed an experimental design similar to Study 1, but included a series of dependent measures related to motivation in the context of preparing for the course (hours spent preparing for class, likelihood of visiting professor during office hours, effort and motivation to work hard.) In lower control situations, where worse-than-average biases pervade, highlighting similarities leads to greater motivation to act while in higher control situations, where better-than-average biases pervade, highlighting differences leads to greater motivation to act. Mediation analysis revealed that perceptions of one’s own control over these situations, and not the other’s, drive this result.

Thus our studies integrate a variety of findings in extent literature by identifying outcome controllability as a variable that determines whether a better-than-average versus worse-than-average bias manifests, illustrating that in the face of uncertain information about others, highlighting perceived similarity can attenuate these biases. Furthermore, information about similarity or differences with others leads to changes in the perception of one’s own control rather than that of the other person—people appear to use information by others to update information about themselves. Clarifying the roles of outcome controllability and perceived similarity in these comparative biases allows us to specify how situations can be framed to motivate desired behavioral action, such as in domains of education, employee incentive schemes, and beneficial public behaviors.

“IT’S NOT JUST ME: THE ROLE OF INFERENCE REFERENCE DISTRIBUTIONS ON ESTIMATES OF ONE’S OWN COMPARATIVE PERFORMANCE”
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Research exploring how people make estimates about themselves compared to others has found systematic biases. For instance, easy tasks produce better-than-average (BTA) effects while difficult tasks produce worse-than-average (WTA) effects. Researchers have generally argued that these biases are due to participants’ errors in combining the information about themselves and others into percentile estimates: People focus primarily on information about themselves and fail to incorporate information about the reference group (i.e., Kruger and Burris 2004).

In three studies, we show that judges do attend to others when evaluating their relative standing, but that they tend to believe that others are distributed dispersely across the possible outcomes. Especially for easy or difficult tasks, the true distributions of performance are actually skewed. The first study illustrates how this simple mismeasurement can explain BTA and WTA effects. We then demonstrate that participants do indeed incorporate these beliefs about others into their comparative assessments. In studies 2-3, we are also able to show that participants’ perceptions of the reference group are labile. We demonstrate that simple availability or response scale manipulations can change the perceived dispersion of others and subsequently change estimates of relative standing.

In study 1, we gave participants one difficult, one moderate, and one easy quiz about everyday knowledge. Participants estimated their own score, provided us with their perception of distribution of others’ performances on each quiz, and estimated their own relative standing. As predicted, participants believed they were WTA on the difficult quiz, were unbiased on the moderate quiz, and BTA on the easy quiz. However, inspection of the estimated distributions revealed that they were significantly more disperse than the actual distributions of performance. To examine whether participants showed BTA and WTA biases because they ignored others’ when forming their relative perceptions, we created a new variable we call “should standing”: Given each participant’s estimated score and estimated distribution of others, we calculated the percentile that each participant should have estimated. This variable contained both information about the participant’s expected score and the distribution of performance in which that score lay. As predicted, regressions showed that BTA and WTA effects were explained by both participants’ beliefs about their own scores and the distribution of scores. Specifically, this information fully mediated the relationship between estimated score and estimated percentile. The next two studies also show that participants incorporate beliefs about others into their relative assessments. However, these studies also extend the results of the previous study to show how trivial manipulations can influence perceptions of the reference group and hence whether people believe they are better or worse than others.

In study 2, we asked participants how far they could putt in golf, how many Trivial Pursuit questions out of 20 they could answer correctly, and how many cell phone minutes they used per month. This time, the perception of the distribution of others for each of the three domains was manipulated. We varied the granularity of the scales. For instance, for trivial pursuit, one condition estimated the scores of the reference group on a scale that highlighted poor performance (0 correct, 1 correct, 2 correct, ..., 6-10 correct, 11-15, etc.) while the other condition estimated others’ performances on a scale that highlighted good performance (0-5 correct, 6-10 correct, 11-15 correct, 16 correct, 17 correct, 18 correct, etc.). Similar scale-granularity manipulations were used in the other two domains. As predicted, percentile estimates were significantly shifted by the scale manipulation. When low numbers on the scale were highlighted, participants tended to estimate that more of their reference group fell in this area of the scale than when the high numbers were highlighted. Furthermore, it was participants’ incorporation of these distributional beliefs that explained the occurrence of both BTA and WTA effects.

Study 3 manipulated perceptions of the distribution by manipulating the availability of distributional extremes. We showed participants a website for products for short or tall consumers. Participants examining the “short” website believed they were taller than those viewing the “tall” website. Once again, inspection of the perceived distributions of others showed that the manipulation produced a significant shift in these perceptions and it was these perceptions that explained relative estimates.

These experiments show that participants can incorporate beliefs about others into their percentile estimates and strongly suggest that inaccurate estimated distributions are to blame for relative miscalibration. If these perceptions of relative standing are inaccurate, so may be purchases. But, if marketers anticipate that
people are likely to imagine referent distributions as normal, they may be able to help them make better decisions.

**“Overconfidence and Entry into Competitions: Reconciling Discrepant Results”**

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Numerous research results attest to the robustness of people’s belief that they are better than others. The strength of this evidence was sufficient for the most popular social psychology text in the United States to claim that “for nearly any subjective and socially desirable dimension...most people see themselves as better than average” (Myers 1998). Griffin and Varey (1996) went further, claiming that “Overconfidence is not only marked but nearly universal.” So it is noteworthy that recent studies have found strong evidence of instances in which people, on average, believe that they are worse than others (Kruger 1999; Moore 2007). We attempt to reconcile these discrepant findings.

Our reconciliation focuses on self-selection and argues that people naturally choose tasks on which they believe they are better than others. Therefore, wherever people can choose whether to take part, we should expect to find that competitors generally think they are better than others, even when they are not. We introduce a lab experiment—a market-entry game of skill—with both hard and easy tasks and allow participants to choose where to compete. We expected that people would be more likely to believe that they had performed better than others on the easy task than the hard one.

**Hypotheses.** We devised a market-entry game in which participants had to choose which of two tournaments they would enter. We randomly varied both the size of the prize associated with each tournament and the difficulty of the quiz, where scores determined entrants’ chances of winning the prize. Each entrant’s probability of winning the prize for a given tournament was proportional his or her relative quiz performance. For half of our participants, the hard quiz was associated with a $90 prize and the easy quiz was associated with a $45 prize. For the other half of our participants, the prizes sizes were reversed.

Given prior experimental findings (Rapoport, Lo, and Zwick 2002), we predicted that our experimental participants would respond to increased prizes with increased entry. The Nash equilibrium would predict that two-thirds of participants in each condition would choose the prize with the larger size. This implies the expected value of entry in each tournament would be equal.

These predictions stand in contrast to prior findings that people believe they are better than average on easy tasks and worse than average on hard tasks, which led us to predict excess entry in tournaments of easy tasks and insufficient entry in tournaments of hard tasks. Finally, we also predicted that those who most overestimate their performances on any particular task relative to others would disproportionately choose to compete in it. Consequently, we predicted that, subjects would, on average, believe that they were better than average at that task where they chose to compete.

**Method.** The 160 participants in our experiment took two ten-item tests, one easy and one hard. Each test was associated with a cash prize. Participants had to choose which prize to compete for.

**Results.** On average, participants were more likely to believe that they were better than others on the easy quiz \(M = 0.30, SD = 1.76\) and worse than others on the hard quiz \(M = 0.12, SD = 2.14\), \(t(159) = 2.41, p < 0.02\). The majority of participants (67 percent) chose to compete for the prize associated with the easy quiz. This difference overwhelmed the effect of our manipulation of prize size. Similar proportions of participants chose to compete for the easy prize, regardless of whether it was the $90 prize (70 percent) or the $45 prize (64 percent). However, looking only at the contests where participants chose to compete, they reported themselves to be, on average, above average \((M = .36, SD = 1.92), t(159) = 2.35, p = .02\).

**Discussion.** Most of our participants chose to compete in the easy tournament. Of those, 68% would have been better off individually competing in the hard tournament; and all but one would have been better off switching when the hard tournament held the large prize. So, participants correctly anticipated more competition in the easy tournament, yet flooded into the easy test tournament. No doubt this is because the easy test is where participants tended to underestimate others and therefore tended to believe that they were better than others.

This paper also illustrates how it is that self-selection produces a situation in which people systematically believe that they are better than others at the tasks in which they have chosen to engage. When people are free to choose where to compete, they self-select into domains where they think they have relative advantage. It is also interesting that this effect can result from individuals making rational choices with imperfect information. In other words, people make errors because they have imperfect information regarding their own and others’ performances. However, many of these errors are consistent with Bayesian logic (which underlies differential regression). The final result, however, is that sensible people making sensible choices can produce an outcome that appears irrationally myopic, biased, and is collectively inefficient.

**REFERENCES**


