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Reaching the top and avoiding the bottom: How ranking motivates unethical intentions and behavior[☆]

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ABSTRACT

Across six studies we explore when, why, and how an individual's rank position affects their unethical intentions and behavior. We first demonstrate that competing to attain top ranks leads to more unethical intentions (Study 1) and behaviors (Study 2) than competing to attain intermediate or avoid bottom ranks – even when competing in ranks close to top and bottom ranks (Study 3). We then demonstrate that adding additional extrinsic value to top and bottom ranks (via rewards and punishments) increases unethical intentions for bottom ranks (Study 4), such that competing to attain top and avoid bottom ranks elicits more unethical intentions (Studies 4 and 6) and unethical behaviors (Study 5) than competing to attain intermediate ranks. Finally, we demonstrate that elevated perceptions of power and increases in moral rationalizations mediate these effects for top and bottom ranks respectively (Study 6). We discuss the theoretical and practical implications of these findings.

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1. Introduction

"Martin Winterkorn, Volkswagen's chief executive [...], was in the midst of a plan to more than triple [Volkswagen's] sales in the United States in just a decade – setting it on a course to sweep by Toyota to become the world's largest automaker. [...] Volkswagen's unbridled ambition is suddenly central to what is shaping up as one of the great corporate scandals of the age, [as] Volkswagen said it had installed software in 11 million diesel cars that cheated on emissions tests, allowing the vehicles to spew far more deadly pollutants than regulations allowed. [...] On Mr. Winterkorn's watch, Volkswagen did become the largest automaker in the world, surpassing Toyota in July. He had two months to savor it."

[Hakim, Kessler, & Ewing, 2015, September 26.]

Rankings, defined as lists in which persons or groups are ordered according to their performance on a relevant dimension, are used as a key mechanism to guide important decisions in organizations, such as investments or divestments, promotions or demotions, and various other types of rewards or punishments

(Garcia, Tor, & Gonzalez, 2006). Despite their importance and pervasiveness, however, rankings have been associated with recent high-profile scandals, such as the emission-scandal at Volkswagen, the fuel-economy-scandal at Mitsubishi Motors, the National Football League's 'Deflategate', and doping usage in the Tour de France. These scandals seem to suggest that rankings have the potential to motivate undesirable unethical behaviors, defined as conduct that is "either illegal or morally unacceptable to the larger community" (Jones, 1991, p. 367) and that violates pre-set rules to attain opportunistic gains at others' expense (Lewicki, 1983). Through such unethical behaviors, competitors may illegitimately enhance their performance, thereby allowing an unfair advantage that they would not have had had they played by the 'rules of the game' (cf. Barsky, 2008; Ordóñez, Schweitzer, Galinsky, & Bazerman, 2009; Schweitzer, Ordóñez, & Douma, 2004). Unethical behaviors in a ranking context, therefore, circumvent the legitimate performance basis on which rankings are based (i.e., a rank order of actual performance on a relevant dimension), and thereby undermine the legitimacy of important ranking-based decisions made within achievement-oriented organizations. Given its potentially detrimental effects, it is crucial to understand the relationship between rankings and unethical behavior.

Drawing from ranking theory (Garcia et al., 2006), we argue that the desirability of specific ranks, as a function of their intrinsic and extrinsic value, motivates competitors' willingness to engage in

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unethical conduct at various points of the ranking spectrum. First, we argue that top ranks have a stronger intrinsic value than intermediate and bottom ranks, and demonstrate that competing to attain top ranks elicits more unethical intentions (Study 1) and behaviors (Study 2) than competing to attain intermediate or avoid bottom ranks – even when competing within the proximity of these ranks (i.e., close to the top or bottom; Study 3). These studies demonstrate that top ranks have a strong intrinsic value that motivates unethical conduct in and of themselves. Second, we argue that when top and bottom ranks are supplemented with additional extrinsic value through the promise of rewards or punishments, bottom ranks also elicit higher unethical intentions (Studies 4 and 6) and behaviors (Study 5) compared to competing to attain intermediate ranks, with bottom ranks even exceeding top ranks in unethicality (Studies 4 and 6). These studies demonstrate that certain ranks (e.g., the bottom rank) only elicit unethical intentions and behavior when supplemented with additional extrinsic value. Finally, we argue and demonstrate that elevated perceptions of power (Keltner, Gruenfeld, & Anderson, 2003) serve as a driver of unethical intentions to attain top ranks, whereas increases in moral rationalizations (Bandura, 1990; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Moore, Detert, Treviño, Baker, & Mayer, 2012) serve as a driver of unethical intentions to avoid bottom ranks (Study 6).

This research contributes to the literature on ranking, ethics, and power in several ways. First, we contribute to the literature on ranking theory (Garcia et al., 2006) by demonstrating that top ranks have an intrinsic value that elicits unethical conduct, and that bottom ranks can elicit unethical conduct when extrinsic value is added to them. This expands our knowledge by demonstrating that rankings not only motivate competitive and cooperative behaviors (e.g., Chen, Myers, Kopelman, & Garcia, 2012; Garcia, Song, & Tesser, 2010; Garcia & Tor, 2007; Garcia et al., 2006; Pettit, Sivanathan, Gladstone, & Marr, 2013; Poortvliet, Janssen, Van Yperen, & Van de Vliert, 2009), but also motivate illegitimate unethical behaviors. Although there is research that has demonstrated that rankings may spark interpersonally-harmful behaviors (Poortvliet, 2013), these behaviors were considered to be legitimate in that specific context and are therefore not unethical (e.g., Jones, 1991; Lewicki, 1983). A second related implication is that the present results demonstrate that unethical behaviors are not solely a function of competition (cf. Pierce, Kilduff, Galinsky, & Sivanathan, 2013), which can be perceived across the entirety of the ranking spectrum, but rather a function of specific ranks that competitors are proximal to. Third, our search for the mechanisms behind these ranking effects leads us to integrate literature on ranking theory (Garcia et al., 2006) with insights from that on power (Anderson & Galinsky, 2006; Galinsky, Gruenfeld, & Magee, 2003; Jordan, Sivanathan, & Galinsky, 2011; Keltner et al., 2003) and moral rationalizations (Bandura, 1990; Bandura et al., 1996; Moore et al., 2012) in order to explain *why* those in top and bottom ranks are more likely than those in intermediate ranks to act unethically. We do so by demonstrating that elevated perceptions of power psychologically release those at the top ranks to engage in unethical behaviors, whereas those at the bottom ranks harness moral rationalizations to justify acting unethically in their disadvantaged position. In sum, the current investigation demonstrates that while unethical behavior is more prevalent at the top and the bottom than in the middle, the reason behind these effects are not uniform across the ranking spectrum.

1.1. The unidirectional drive upward and proximity to valuable standards

According to ranking theory, there are two primary motivators that determine the motivational effectiveness of rankings (Garcia

et al., 2006). First, ranking theory uses a social comparison perspective (Festinger, 1954) to propose that individuals constantly compare their own performance on the relevant ability-laden dimension with the performance of their commensurate rivals. Through these comparisons, individuals assess whether their commensurate rivals are or are close to outperforming them. Being outperformed by a commensurate rival on a valued dimension is a threatening experience that drives individuals to attempt to (re)establish their superiority over their rival. Hence, these social comparisons motivate a *unidirectional drive upward*: a need to out-compete all commensurate rivals on the valued, ability-laden dimension until the top of the competition is achieved (Garcia et al., 2006).

Second, in addition to these social comparison processes, ranking theory states that this unidirectional drive upward is conditional upon the *proximity* to certain valuable ranks, where value is either determined by natural characteristics of that rank (i.e., intrinsic value), or by additional consequences that may be associated with that rank (i.e., extrinsic value). In terms of intrinsic value, one of the most notable intrinsically-valuable ranks is the top rank (e.g., being in first place), because this rank signifies that the possessor of that rank has the highest performance and is therefore the best. This inherent characteristic makes top ranks very valuable and motivates a unidirectional drive upward to attain these top ranks. In contrast, other ranks, such as intermediate ranks (e.g., being in middle place), which signify that an individual is performing at an average level, or bottom ranks (e.g., being in last place), which signify that an individual has the lowest performance of all competitors, are typically considered to be less intrinsically valuable and therefore spark lesser motivation to attain or avoid these ranks. The higher intrinsic value possessed by top ranks, therefore, means that individuals are generally more motivated to attain top ranks than they are to attain intermediate or to avoid bottom ranks.

1.2. Rankings and unethical behavior

Research on rankings has investigated various behavioral responses to ranks of different values (Garcia, Tor, & Schiff, 2013). For example, in a single study, Poortvliet (2013) demonstrated that when combined with one's achievement goal (i.e., mastery or performance), rankings affected individuals' engagement in interpersonally-harmful behavior – that is, sending another person an undesirable noise blast. Specifically, the author found that individuals with a mastery goal orientation who occupied increasingly higher ranks, displayed more interpersonally-harmful behavior, whereas individuals with a performance goal orientation engaged in more harmful behavior when in low or high rather than intermediate ranks. Additionally, while not looking at ranking but rather competition, in general, research by Pierce et al. (2013) found that in situations engendering competition (but not cooperation), perspective-taking of one's competitor actually increased unethical behavior towards that competitor. When told that the situation was competitive, people were more likely to report unethical intentions and engage in unethical behaviors (e.g., sending deceptive messages in a social interaction or cheating in an anagram task) when asked to imagine the mindset of one's competitor.

These key contributions considered, both the Poortvliet (2013) and Pierce et al. (2013) studies leave some important questions unanswered. Specifically, neither study investigated the relationship between ranking and unethical behavior, nor did it find a main effect of competition on unethical behavior. That is, even Pierce et al. did not find that competition in and of itself elicited unethical behavior. We propose that this is likely because the direct relationship between competition in and of itself and unethical behavior

does not exist but is moderated by situational contingencies; in the current research, the relationship is *dependent on* a competitor's place in the ranking spectrum. Moreover, although Poortvliet did find an interaction between ranking and achievement goal orientation on engaging in interpersonally-harmful behavior, harmful behavior is not equivalent to unethical behavior. For example, people see moral violations as more wrong (Huebner, Lee, & Hauser, 2010; Turiel, 1983), are more intolerant of them (Bartels, Bauman, Cushman, Pizarro, & McGraw, 2014; Skitka, 2010; Skitka, Bauman, & Sargis, 2005; Turiel, 2002), and they consider behaviors in the moral domain (compared to those outside) as more diagnostic of the individual actor's character (Wojciszke, Bazinska, & Jaworski, 1998). In fact, people view moral behaviors not as a mere signal of one's behavioral preference but rather as objective truth (Goodwin & Darley, 2008).

We suggest that in cases where legitimate modes of behavior to achieve desired outcomes are costly or difficult, individuals may opt to use unethical behaviors as an alternative to these legitimate modes of operation. Adopting unethical behaviors may allow competitors to attain valuable and desirable outcomes that they would not have attained by playing by 'the rules of the game' (Ordóñez et al., 2009; Schweitzer et al., 2004). While unethical behavior may bring about severe punishments if discovered (Becker, 1968; Gino & Margolis, 2011), when the value and desirability of the potential benefits increase, however, the likelihood of adopting unethical behaviors increases (Barsky, 2008; Ordóñez et al., 2009; Schweitzer et al., 2004).

Taken together, we propose that an individual's degree of unethical behavior increases with the unidirectional drive upward as a function of the proximity to intrinsically-valuable ranks. Specifically, because top ranks are considered to be the "obvious, basic, and ubiquitous standard" (Garcia et al., 2006, p. 271), top ranks possess greater inherent intrinsic value than do intermediate and bottom ranks. Given this intrinsic value, we expect that compared to competing to attain intermediate or avoid bottom ranks, individuals will demonstrate the highest levels of unethical intentions and behavior when they are competing to attain top ranks.

Hypothesis 1. Individuals competing to attain top ranks with solely intrinsic value are more likely to have unethical intentions and engage in unethical behavior than individuals competing to avoid bottom or attain intermediate ranks with solely intrinsic value.

Although the intrinsic value of the absolute top position in a ranking spectrum is likely to be a prime motivator for individuals to engage in unethical behaviors, the *proximity* to top ranks may be equally important (cf. Garcia et al., 2006). According to the unidirectional drive upward, motivation to attain the absolute top position in a ranking spectrum (in comparison to ranks that are distal to the top) increases as individuals draw closer to the top, primarily because doing so enhances the salience and feasibility of reaching this coveted position (e.g., Förster, Higgins, & Idson, 1998). This proximity effect implies that individuals may not only be motivated to engage in unethical behaviors when directly competing for the absolute top rank but might also be motivated to reach ranks that are close to the top (Garcia et al., 2006). Hence, we propose that being proximal to the intrinsically-valuable top rank will elicit the same pattern of results as would be found if someone was in the actual top position.

Hypothesis 2. Individuals competing close to top ranks with solely intrinsic value are more likely to have unethical intentions and engage in unethical behavior than individuals competing close to bottom or intermediate ranks with solely intrinsic value.

Because top ranks are considered to be the "obvious, basic, and ubiquitous standard" (Garcia et al., 2006, p. 271), we have thus far assumed that higher ranks have more intrinsic value. As mentioned earlier, however, rankings may also be supplemented with additional extrinsic value by, for example, associating them with certain positive (i.e., rewards) or negative (i.e., punishments) consequences (Garcia et al., 2006; Poortvliet et al., 2009). Indeed, various real-life ranking situations illustrate that top ranks are often accompanied by additional positive consequences through their association with praise, promotions, and other rewards, whereas bottom ranks are often accompanied by negative consequences through their association with disapproval, demotions, and other punishments. Through additional positive or negative consequences, the additional extrinsic value of ranks may induce all sorts of specific motivations (cf. prospect theory [Kahneman & Tversky, 1979] and regulatory focus theory [Higgins, 1997]) that can drive individuals to think and act in ways other than they normally would (Garcia et al., 2006). Particularly, through this additional extrinsic value, ranks that were in of themselves too impotent to elicit any behavioral outcomes may then motivate individuals to consider unethical behavior for their attainment or avoidance (cf. Barsky, 2008; Ordóñez et al., 2009; Schweitzer et al., 2004).

While the insidious motivational effect of top ranks' intrinsic value is often supported by anecdotal evidence (e.g., the Volkswagen case that was presented in the Introduction) and theory (cf. Hypotheses 1 and 2), there are numerous examples of bottom ranks also motivating unethical behavior (e.g., players cheating in [board]games to not be in last place; athletes using dope to avoid falling behind). Given that bottom ranks have lesser intrinsic value than top ranks, their potential to motivate unethical behavior must come from some other source; we propose that it originates in the additional negative consequences that are often associated with them. Thus, we propose that, unlike high ranks, low ranks require extrinsic value to lead the possessor to engage in unethical intentions or behavior. However, given the existing intrinsic value of top ranks, such extrinsic value is unlikely to affect the engagement in unethical behavior of those competing to attain top ranks.

Hypothesis 3. Individuals competing to avoid bottom ranks with additional extrinsic value are more likely to have unethical intentions and engage in unethical behavior than individuals competing to avoid bottom ranks with solely intrinsic value.

Hypothesis 4. Individuals competing to attain top or avoid bottom ranks with additional extrinsic value are more likely to have unethical intentions and engage in unethical behavior than individuals competing to attain intermediate ranks with solely intrinsic value.

2. Releasing ethical inhibitions for top and bottom ranks

Thus far we have assumed that the desirability of intrinsically- and extrinsically-valuable ranks is sufficient for individuals to engage in unethical behaviors. While it holds true that attaining desirable or avoiding undesirable outcomes are important drivers for individuals to engage in unethical behaviors (cf. Ordóñez et al., 2009; Schweitzer et al., 2004), individuals are typically inhibited from engaging in such behaviors (Jordan & Monin, 2008). This inhibition stems from the fact that individuals have a need to maintain a moral self-image (Jordan, Mullen, & Murnighan, 2011) and the additional fact that engaging in unethical behaviors directly harms this moral self-image (Jordan, Leliveld, & Tenbrunsel, 2015). Before allowing themselves to engage in

unethical behaviors, therefore, individuals need to be released of their ethical inhibitions (Tenbrunsel & Smith-Crowe, 2008; Treviño, den Nieuwenboer, & Kish-Gephart, 2014). We propose that within the context of top and bottom ranks, two such sources of release are relevant: greater perceptions of power for those competing to attain top ranks and greater moral rationalizations for those competing to avoid bottom ranks.

Perceptions of power are defined as the belief in one's asymmetrical control over valued resources in social situations (Magee & Galinsky, 2008). Those with reduced power are dependent on those with elevated power to attain valuable resources, whereas those with elevated power have no such dependencies (Emerson, 1962; Jordan, Sivanathan et al., 2011). Being in the top rank implies that the individual is the best on a relevant performance dimension, which implies that he or she has superior competence relative to all other competitors (Garcia et al., 2006). Given the intrinsic value of top ranks (both from the perspective of the one endowed with the rank and from those perceiving him/her), we argue that individuals who are competing to attain a top rank have greater perceptions of power than do those competing for other ranks. Other competitors will perceive this competence to be valuable (Cheng, Tracy, & Henrich, 2010), making those in top ranks more attractive (Henrich & Gil-White, 2001), and empowered (Anderson, Spataro, & Flynn, 2008; Driskell, 1982; Homans, 1950) than those lower down the hierarchy.

Perceptions of power are associated with various cognitive, affective, and motivational outcomes that may release the possessors to engage in unethical behaviors. For example, there is evidence that the powerful are more likely than the powerless to be driven by their own interests and views (Galinsky, Magee, Gruenfeld, Whitson, & Liljenquist, 2008; Galinsky et al., 2003) and unconcerned with others' needs and opinions (Emerson, 1962; Galinsky, Magee, Inesi, & Gruenfeld, 2006; Keltner et al., 2003; Lammers, Stapel, & Galinsky, 2010). The powerful are also more likely than the powerless to take action (Galinsky et al., 2003), and to engage in functional behaviors (Gruenfeld, Inesi, Magee, & Galinsky, 2008). Finally, the powerful tend to underestimate the negative consequences of their actions (Inesi, 2010), are more confident in their judgments (See, Morrison, Rothman, & Soll, 2011), and as such, are more prone to taking risks (Anderson & Galinsky, 2006), which makes them more likely to engage in unethical conduct (Gino & Margolis, 2011).

Taken together, the evidence suggests that individuals competing to attain top ranks should experience an elevated sense of power compared to individuals competing for lower ranks (i.e., intermediate and bottom ranks). As such, these elevated perceptions of power make top-ranked competitors less inhibited by the press of the situation (Galinsky et al., 2008) and more prone to engage in unethical conduct (Anderson & Galinsky, 2006; Gino & Margolis, 2011; Keltner et al., 2003).

Hypothesis 5. Individuals competing to attain top ranks have more unethical intentions and engage in more unethical behavior because of increased perceptions of power.

Whereas those competing to attain top ranks can rely on elevated perceptions of power to psychologically release themselves of their ethical inhibitions, such a release is unavailable to those competing to avoid bottom ranks. We suggest that those competing to avoid bottom ranks may release their ethical inhibitions by engaging in moral rationalizations. Moral rationalizations refer to the process by which individuals change cognitions about (their own) unethical behaviors in order to better meet their positive expectations about the self (Bandura, 1990; Tsang, 2002). This alteration allows individuals to convince themselves that their behaviors are moral – even if they may not actually be so. Given

that these moral rationalizations reduce the negative labeling of these behaviors (at least to the actor), individuals will find that their behaviors are no longer discrepant with their desired moral self (Jordan et al., 2015), thereby providing the psychological release to engage in the unethical behaviors (Aquino, Reed, Thau, & Freeman, 2007; Bandura et al., 1996; Beu & Buckley, 2004). Thus, in order to avoid the negative consequences of low ranks, those at the bottom engage in increased moral rationalizations, which help to justify their engagement in unethical intentions and behaviors.

Hypothesis 6. Individuals competing to avoid bottom ranks, when those ranks contain additional extrinsic value, have more unethical intentions and engage in more unethical behavior because of increased moral rationalizations.

3. The present research

We conducted six studies to test our hypotheses. First, we conducted Studies 1 through 3 to demonstrate that competing to attain top ranks with solely intrinsic value elicits more unethical intentions and behavior (Hypothesis 1) than competing to attain intermediate or avoid bottom ranks with solely intrinsic value, and that competing close to top ranks elicits more unethical intentions than competing for intermediate ranks or competing close to bottom ranks (Hypothesis 2). Second, we conducted Studies 4 through 6 to demonstrate that bottom ranks with additional extrinsic value elicit more unethical intentions than bottom ranks with solely intrinsic value (Hypothesis 3), and that top and bottom ranks with additional extrinsic value elicit more unethical intentions and behavior than intermediate ranks (Hypotheses 4). Third, we conducted Study 6 to demonstrate that elevated perceptions of power explain the unethical effects for top ranks (Hypothesis 5) and that increases in moral rationalizations explain the unethical effects for bottom ranks (Hypothesis 6).

4. Study 1: The intrinsic value of top ranks and unethical intentions

In Study 1, we investigate whether competing to attain top ranks (void of any additional extrinsic value) elicits a greater willingness to engage in unethical behaviors than competing to attain intermediate or avoid bottom ranks. If true, this result supports Hypothesis 1, suggesting that the greater intrinsic value that accompanies the top rank leads its possessors to engage in greater unethical intentions.

4.1. Methods

4.1.1. Participants and design

One hundred and twenty-eight United States residents ($M_{\text{age}} = 34.83$, $SD_{\text{age}} = 11.77$, 37% female) were recruited through Amazon's Mechanical Turk (Mturk). We told participants that we were investigating how personality characteristics influence people's decisions. They were provided with \$0.25 for their participation. We randomly assigned participants to one of five experimental conditions in a 5 (Scenario [between-subjects]) $\times$ 3 (Rank: bottom vs. intermediate vs. top [within-subjects]) mixed design.

4.1.2. Procedure

Consistent with previous research on ranking effects (e.g., Garcia & Tor, 2007; Garcia et al., 2006), we used several decision-making scenarios (see Appendix A for the scenarios of Studies 1 and 3) to enhance psychological realism and thus, the external validity (Aronson, Wilson, & Brewer, 1998). Each scenario

described that the competitor was tied with his or her rival for two specific ranks (i.e., rank # n and rank # $n + 1$). A zero-sum situation (Bazerman, Baron, & Shonk, 2001; Lawler, 2003; Mittone & Savadori, 2009) was implied in which either the competitor or rival would attain the higher of the two ranks. Subsequently, the scenario described that the competitor could increase the likelihood of attaining the higher rank (# n) instead of the lower rank (# $n + 1$) by engaging in a specific unethical behavior.

The five scenario conditions contained situations in which participants had the possibility of sabotaging their rival's play (Scenario #1, 100 competitors) or acquiring additional chips (Scenario #2, 100 competitors) in a poker tournament, overstating their performance in an organizational context (Scenario #3, 30 competitors), manipulating the sales system in a sales department (Scenario #4, 40 competitors), and employing a key person in a Fortune 500 company, even though this would purposely violate pre-set industry rules and norms (Scenario #5, 500 competitors). After reading the scenario (the order of presentation was randomized), we asked participants to indicate how likely they would be to engage in the specified unethical behavior if they were tied for top, intermediate, and bottom rank.

4.1.3. Dependent variable

As a within-subjects test of our rank factor, we presented three questions asking about the likelihood with which participants would engage in the specified unethical behavior. The three questions all had the same setup: "How likely would you be to [unethical behavior] if you were tied for ranks [# n] and [# $n + 1$] out of [total N]?" (1 = *very unlikely*, 7 = *very likely*). The questions asked this for the bottom (second-to-last and last place), intermediate (total possible ranks/2 and [total possible ranks/2] + 1), and top ranks (first and second place).

4.2. Results

4.2.1. Unethical intentions

We analyzed the data using a repeated-measures analysis of variance with scenario as a between-subjects factor and rank as a within-subjects factor. We inspected the lower bound, because this was the most conservative test of our hypotheses. This analysis (lower-bound) revealed a main effect of rank, $F(1,122) = 6.38$, $p = 0.01$, $\eta_p^2 = 0.05$, and no interaction between rank and scenario, $F(4,122) = 1.21$, $p = 0.31$, $\eta_p^2 = 0.04$. Consistent with Hypothesis 1, additional contrast analyses (see Fig. 1) revealed that top ranks elicited more unethical intentions ($M = 3.35$, $SD = 2.30$) than intermediate ($M = 2.80$, $SD = 1.87$), $F(1,122) = 10.75$, $p < 0.01$, $\eta^2 = 0.08$, or bottom ranks ($M = 2.87$, $SD = 2.06$), $F(1,122) = 5.20$, $p < 0.02$, $\eta^2 = 0.04$, and that there were no differences between intermediate and bottom ranks, $F(1,123) = 0.39$, $p = 0.53$, $\eta^2 = 0.00$.

4.3. Discussion

In support of Hypothesis 1, the results of Study 1 demonstrate that competing to attain top ranks elicits more unethical intentions than competing to attain intermediate or avoid bottom ranks. While Study 1 demonstrated that top ranks elicited more unethical intentions, it did not provide an indication as to whether top ranks also motivated unethical behaviors.

5. Study 2: the intrinsic value of top ranks and unethical behaviors

Again testing Hypothesis 1, we conducted Study 2 to investigate whether top ranks, compared with intermediate and bottom ranks, would also elicit more unethical behaviors.

Fig. 1. Means for unethical intentions (Study 1). Note: Error bars represent standard errors.

5.1. Methods

5.1.1. Participants and design

One hundred and seventy-one United States residents ($M_{age} = 36.45$, $SD_{age} = 11.99$, 58% female) were recruited through Mturk.¹ We told participants that we were investigating how personality characteristics influenced people's decisions. They were provided with \$0.50 for participation. After participants read and signed the informed consent, we randomly assigned them to one of three experimental conditions (Rank: bottom vs. intermediate vs. top) in a one-way between-subjects design.

5.1.2. Procedure

Based on the public-goods game created by Pierce et al. (2013; Experiment 3), we first presented participants with instructions on a 10-round bidding competition amongst 40 competitors (see Appendix B for the exact instructions). We told participants that the purpose of the bidding competition was to accrue as many points as possible and that they could accrue these points by bidding against another competitor on various playing cards. Each of these playing cards possessed a different value (i.e., number of points), making some more desirable and valuable than others. At the start of each of the ten rounds, competitors received a random allocation of between 100 and 150 'bidding units' that they could use to bid on the different playing cards. Any bidding unit not used was carried over to the next round. After this allocation, competitors exchanged information on how many bidding units they were allocated in that round, which was crucial to determining potential bidding strategies. After the information exchange, competitors bid on one of the ten playing cards. This continued until all ten rounds were played. After the explanation of the bidding competition, we provided participants with one of three scenarios, depending on whether they were assigned to the bottom-, intermediate-, or top-rank condition. The scenario read (intermediate and bottom ranks between brackets in *italics*, separated by a slash):

"Imagine that you are participating in the 40-person bidding competition. You have played 8 out of 10 rounds, and are ready to play the 9th round. Based on the number of points you have, you are tied with a fellow competitor for ranks #1 and #2 (*#19 and #20/#39 and #40*) out of 40. It seems likely that you will be ending up in one of these two ranks. The last two rounds will be crucial in determining whether you will end up in first (*nineteenth/thirty-ninth*) or second (*twentieth/fortieth*) place. You will now start with the 9th round."

¹ An additional 46 participants were compensated but excluded from the dataset because they failed the attention check.

After participants read the scenario, they were presented with the ninth round of the bidding competition. All participants were 'randomly' allocated 128 bidding units. After participants indicated the number of bidding units they assigned to their opponent, the ninth round ended, and participants completed an attention check.

5.1.3. Dependent variable

In terms of information exchange, participants could share any number between 100 and 150 to their rival competitor. This means that participants could share a number of bidding units that differed from the 128 that were actually allocated to them (i.e., the honest response). Consistent with [Pierce et al. \(2013\)](#), we operationalized unethical behavior as either having not lied (indicated allocation = 128; unethical behavior = 0) or as having lied (indicated allocation $\neq$ 128; unethical behavior = 1).

5.2. Results

5.2.1. Unethical behavior

Seventy-two (42.1%) participants lied about the random allocation that they had received. A logistic regression analysis revealed no significant difference in unethical behaviors between the bottom (35.8%) and intermediate (36.9%) conditions, $Wald = 0.01$, $p = 0.92$, but did reveal (marginally) significant differences between the bottom and top (54.7%), $Wald = 3.93$, $p = 0.05$, and intermediate and top conditions, $Wald = 3.66$, $p = 0.06$ (see [Fig. 2](#)).²

5.3. Discussion

Consistent with Study 1, and in support of [Hypothesis 1](#), the results of Study 2 demonstrate that competing to attain top ranks (in and of themselves) elicits more unethical behavior than competing to attain intermediate or avoid bottom ranks. Hence, Study 2 demonstrates that rankings not only elicit unethical intentions, but also unethical behavior. This further supports our argument that unethical behavior is motivated by the unidirectional drive upward elicited by intrinsically-valuable top ranks. Central in this theory, however, is that this unidirectional drive upwards also exists even when one is *proximal* to meaningful ranks. Hence, to truly assess whether the unidirectional drive upward motivates unethical intentions and behaviors, we would not only need to assess whether individuals demonstrate more unethical intentions when seeking to attain the absolute top rank, but also whether they demonstrate these intentions when they are seeking a position in the ranking spectrum that is *proximal* to top ranks.

6. Study 3: Proximity to intrinsically-valuable top ranks and unethical intentions

As a test of the unidirectional drive upward and an extension of the results of Studies 1 and 2, the main purpose of Study 3 was to test [Hypothesis 2](#) by examining whether competing *close* to top ranks (e.g., second and third place instead of first and second place) would elicit more unethical intentions than competing for intermediate ranks or *close* to bottom ranks (e.g., third-to-last and second-to-last place). If the unidirectional drive upward indeed applies in this context, we should see that proximity to these intrinsically-valuable ranks elicits the same pattern of results found in the previous two studies where rank was absolute.

Fig. 2. Percentages of unethical behavior (Study 2).

6.1. Methods

6.1.1. Participants and design

Eighty-eight business undergraduates from a Dutch university ($M_{age} = 21.24$, $SD_{age} = 3.21$; 45% female) participated in this study for either €6 or partial course credit. Participants were told that the study investigated how people perform under pressure and how they respond to different scenarios. All of the materials were presented in English. We randomly assigned participants to one of five experimental conditions in a 5 (Scenario [between-subjects]) $\times$ 3 (Rank: proximal bottom vs. intermediate vs. proximal top [within-subjects]) mixed design.

6.1.2. Procedure

All procedures were identical to those of Study 1.

6.1.3. Dependent variable

The same questions were asked as in Study 1, with the alteration that top ranks (i.e., first and second place) were replaced with *close* to top ranks (i.e., second and third place for Scenarios #1 through #4 and fourth and fifth place for Scenario #5) and that bottom ranks (i.e., second-last and last place) were replaced with *close* to bottom ranks (i.e., third-to-last and second-to-last place for Scenarios #1 through #4 and fifth-to-last and fourth-to-last for Scenario #5).

6.2. Results

6.2.1. Unethical intentions

We analyzed the data using a repeated-measures analysis of variance with scenario as the between-subjects factor, and rank as the within-subjects factor. This analysis (lower-bound) revealed a main effect of rank, $F(1,83) = 12.92$, $p < 0.01$, $\eta_p^2 = 0.14$, and no interaction effect of scenario, $F(4,83) = 0.50$, $p = 0.73$, $\eta_p^2 = 0.02$. Consistent with [Hypothesis 2](#), additional contrast analyses (see [Fig. 3](#)) revealed that participants in proximal top ranks had higher unethical intentions ($M = 3.77$, $SD = 2.16$) than intermediate ($M = 2.83$, $SD = 1.74$), $F(1,83) = 17.41$, $p < 0.01$, $\eta^2 = 0.17$, or proximal bottom ranks ($M = 2.64$, $SD = 2.00$), $F(1,83) = 14.75$, $p < 0.01$, $\eta^2 = 0.15$, and that there were no significant differences between the unethical intentions of intermediate and proximal bottom ranks, $F(1,83) = 1.19$, $p = 0.28$, $\eta^2 = 0.01$.

6.3. Discussion

In support of [Hypothesis 2](#), the results of Study 3 demonstrate a similar pattern as found in Studies 1 and 2: competing close to top ranks elicits more unethical intentions than competing for inter-

² By including the 46 participants who were excluded based on the attention check, the difference between bottom (40.3%) and intermediate (38.9%) remains insignificant, $Wald = 0.03$, $p = 0.87$, the difference between bottom and top (53.4%) becomes insignificant, $Wald = 2.50$, $p = 0.11$, and the difference between intermediate and top remains (marginally) significant, $Wald = 3.06$, $p = 0.08$.

Fig. 3. Means for unethical intentions (Study 3). *Note:* Error bars represent standard errors.

mediate ranks or close to bottom ranks. The results of Study 3 are therefore supportive of our assertion that the unidirectional drive upward, as a function of the proximity to intrinsically-valuable ranks, elicits unethical intentions and behaviors. Indeed, as the results of Studies 1 through 3 suggest, the unidirectional drive upward that rankings engender have the motivational potency of eliciting unethical intentions and behaviors amongst competitors.

7. Study 4: Extrinsically-valuable top and bottom ranks and unethical intentions

The main purpose of Study 4 was to test [Hypotheses 3 and 4](#) by examining whether top and bottom ranks with additional extrinsic value would alter the pattern of results found in Studies 1 through 3 (where we examined top and bottom ranks with solely intrinsic value). Particularly, we wanted to identify whether bottom ranks with additional extrinsic value would elicit more unethical intentions than bottom ranks with solely intrinsic value ([Hypothesis 3](#)), and whether both top and bottom ranks with additional extrinsic value would elicit more unethical intentions than intermediate ranks ([Hypothesis 4](#)). We test these hypotheses by using a similar experimental design as Study 1 (i.e., we used actual rather than proximal top and bottom ranks), in which we included an additional factor to contrast intrinsically-valuable ranks with ranks endowed with additional extrinsic value.

7.1. Methods

7.1.1. Participants and design

Two-hundred and sixty-two business undergraduates from a Dutch university ($M_{\text{age}} = 20.85$, $SD_{\text{age}} = 2.67$, 63% female) participated in this study. They were provided with €8 or partial course credit for their participation. Participants were told that the study investigated how people react under pressure and how they react to different scenarios. We randomly assigned them to one of ten experimental conditions in a 5 (Scenario [between-subjects]) $\times$ 3 (Rank: bottom vs. intermediate vs. top [within-subjects]) $\times$ 2 (Value: intrinsic vs. additional extrinsic [between-subjects]) mixed design.

7.1.2. Procedure

To manipulate the intrinsic and additional extrinsic value of ranks, we altered three scenarios from Studies 1 and 3. For the extrinsic-value conditions, Scenarios 1 and 2 contained situations in which overstating one's performance in an organizational context (30 employees) would lead one to receive a pay raise for being in first place or avoid a pay cut for being in last place (Scenario #1), or a promotion for being in first place or avoid a demotion for being

in last place (Scenario #2). Scenarios 3 and 4 contained situations in which manipulating the sales system in one's sales department (40 employees) would lead one to receive the same pay raise/pay cut (Scenario #3) or promotion/demotion (Scenario #4). Finally, Scenario 5 placed the participant in the role of the CEO of a Fortune 500 company. In this role, the participant could employ a key person from a rival company, even though doing so would go against pre-established industry norms and rules. Employing this key person could make the difference between obtaining important exposure for being in first place, or losing important exposure for being in last place and hence, dropping out of the Fortune 500. For the intrinsic-value conditions, we used the same scenarios but removed any references to rewards and punishments (i.e., the same as Scenarios 3, 4, and 5 of Studies 1 and 3; see [Appendix C](#)). Apart from these scenario changes and the additional manipulated factor, all other procedures were identical to Studies 1 and 3.

7.1.3. Dependent variable

The same questions as in Studies 1 and 3 were asked, albeit tailored to the relevant number of competitors and unethical behaviors in each scenario.

7.2. Results

7.2.1. Unethical intentions

We analyzed the data using a repeated-measures analysis of variance with value and scenario as between-subjects factors and rank as a within-subjects factor. Analyses (lower-bound) revealed a main effect of rank, $F(1,252) = 30.90$, $p < 0.001$, $\eta_p^2 = 0.11$, an interaction effect of value $F(1,252) = 6.57$, $p = 0.01$, $\eta_p^2 = 0.03$, no interaction effect of scenario, $F(4,252) = 0.71$, $p = 0.59$, $\eta_p^2 = 0.01$, and no three-way interaction, $F(4,252) = 0.80$, $p = 0.52$, $\eta_p^2 = 0.01$. These results suggest that the patterns of unethical intention across top, intermediate, and bottom ranks differ based on whether they include extrinsic value or whether they solely include intrinsic value. Indeed, consistent with [Hypothesis 3](#), additional contrast analyses (see [Fig. 4](#)) revealed that bottom ranks with extrinsic value ($M = 4.63$, $SD = 2.31$) elicited more unethical intentions than bottom ranks with solely intrinsic value ($M = 3.58$, $SD = 2.22$), $F(1,252) = 14.21$, $p < 0.001$, $\eta_p^2 = 0.05$, but that top ranks with extrinsic value ($M = 3.95$, $SD = 2.35$) did not elicit more unethical intentions than top ranks with solely intrinsic value ($M = 3.99$, $SD = 2.23$), $F(1,252) = 0.03$, $p = 0.86$, $\eta_p^2 = 0.00$. Furthermore, consistent with [Hypothesis 4](#), additional contrast analyses revealed that within the extrinsic value conditions, both bottom ($M = 4.63$, $SD = 2.31$), $F(1,127) = 52.34$, $p < 0.001$, $\eta_p^2 = 0.29$, and top ranks ($M = 3.95$, $SD = 2.35$), $F(1,127) = 18.26$, $p < 0.001$, $\eta_p^2 = 0.13$, elicited

Fig. 4. Means for unethical intentions (Study 4). *Note:* Error bars represent standard errors.

more unethical intentions than intermediate ranks ($M = 2.95$, $SD = 2.03$), and that bottom ranks also elicited more unethical intentions than top ranks, $F(1, 127) = 7.52$, $p < 0.01$, $\eta^2 = 0.06$.

7.3. Discussion

Consistent with [Hypotheses 3 and 4](#), Study 4's results are supportive of our assertion that supplementing ranks with additional extrinsic value influences unethical intentions. The results of Study 4 replicate and extend the findings of Studies 1 through 3 in several ways. First, they replicate our previous findings by demonstrating that top ranks with mere intrinsic value elicit more unethical intentions than intermediate and bottom ranks ([Hypothesis 1](#)). Second, they extend our previous findings by demonstrating that bottom ranks with additional extrinsic value elicit more unethical intentions than bottom ranks with mere intrinsic value ([Hypothesis 3](#)), and that both top and bottom ranks with additional consequences elicit more unethical intentions than intermediate ranks ([Hypothesis 4](#)). Third, they extend our previous findings by demonstrating that additional extrinsic value does not increase unethical behaviors for top ranks above and beyond the intrinsic value that they already have. This indicates that ranks respond differently to additional extrinsic value, particularly such that ranks that already are valuable do not benefit from additional extrinsic value, whereas ranks that are lacking in value do benefit from additional extrinsic value. Finally, given the within-subject nature of the study, competitors were seemingly able to cognitively differentiate between the rewards and punishments associated with their respective ranks and shaped their unethical intentions accordingly.

An unpredicted finding was that competing to avoid extrinsically-valuable bottom ranks elicited more unethical intentions than competing to attain extrinsically-valuable top ranks. This finding was, however, consistent with prospect theory ([Kahneman & Tversky, 1979](#)), which states that individuals are more sensitive to punishments than rewards, making them more likely to take risks and engage in unethical behaviors to avoid these undesirable outcomes (cf. [Kern & Chugh, 2009](#)). Given that we added extrinsic value to these ranks, such that bottom ranks were extrinsically undesirable and that top ranks were extrinsically desirable, it seems prudent to assume that the prospect of punishment (i.e., the bottom rank additional extrinsic value) outweighed the prospect of rewards (i.e., the top rank additional extrinsic value), leading the bottom ranks to exceed top ranks in their unethical intentions.

8. Study 5: Extrinsically-valuable top and bottom ranks and unethical behaviors

Although Study 4 supported [Hypothesis 4](#) by demonstrating that extrinsically-valuable top and bottom ranks elicited more unethical intentions than intermediate ranks, it did not demonstrate whether these effects also held for unethical behaviors. Thus, we conducted Study 5 to investigate if the effects within the additional extrinsic value conditions, as seen in Study 4, extended to actual unethical behaviors.

8.1. Methods

8.1.1. Participants and design

One hundred and thirty-nine Dutch business undergraduates ($M_{\text{age}} = 21.78$, $SD_{\text{age}} = 2.56$, 52% female) participated in this study. Participants were provided with €8 or partial course credit and were told that they were participating in a study on competition. Participants were randomly assigned to one of three experimental conditions (Rank: bottom vs. intermediate vs. top) in a one-way between-subjects design.

8.1.2. Procedure

We told participants that we were conducting a study in which they would compete against 29 other students on the basis of their numeric, linguistic, spatial, and cognitive abilities. We informed them that, as part of the competition, they would be provided with a €4 bonus that they could either lose if they ended up in last place or double if they ended up in first place. The suggested bonus pay-offs were therefore €0 (i.e., ending up in last place), €4 (i.e., ending up in any other place than last or first place), or €8 (i.e., ending up in first place).³ In this competition, participants first completed a math task in which they had to solve numeric expressions and unscramble an anagram task. They were then provided with a preliminary ranking of their performance, which was #27 (bottom), #16 (intermediate) or #4 (top). After this feedback round, participants completed a maze task in which they had to guide a mouse out of a maze, followed by another preliminary ranking of their performance, in which they were either tied for places #29 and #30 (bottom), #15 and #16 (intermediate) or #1 and #2 (top). Participants then read that this tie would be resolved in a final bidding task in which they would directly be competing against the student they were tied with (i.e., their rival competitor). In this task, participants had the opportunity to lie to their rival competitor about crucial information. Whether participants would lie or not served as the dependent measure. Finally, as a manipulation check, we asked participants which rank they were in and several other information checks to ensure that they understood the procedures and rules of the bidding task.

8.1.3. Bidding task and unethical behaviors

To assess unethical behaviors, we used the same bidding task as employed in Study 2 but here, participants believed that they were actually in their assigned rank, they actually began in the first round, and the task ended after the first information exchange regarding the 'randomly' allocated 128 bidding units. Again, consistent with [Pierce et al. \(2013\)](#), we operationalized unethical behavior as either having not lied (indicated allocation = 128; unethical behavior = 0) or as having lied (indicated allocation $\neq$ 128; unethical behavior = 1).

8.2. Results

8.2.1. Manipulation and information checks

We used several manipulation and information checks that we recoded (correct answer = 0, incorrect answer = 1) to assess if respondents paid attention to the manipulations and procedures, and compared these answers across the three different rank conditions. The results indicated that most of the participants attended to crucial details of the study and that this did not depend on their assigned experimental condition.⁴

8.2.2. Unethical behavior

Sixty-six (47.5%) participants lied about the random allocation that they had received. A logistic regression analysis revealed a sig-

³ In reality, all participants, regardless of outcome received a bonus of €4. This was done in response to a request from our Institutional Ethics Review Board who felt it was unethical to vary compensation.

⁴ One-hundred and thirty-five (97.1%) participants correctly indicated which rank they were in, with no differences between rank conditions, $\chi^2(2) = 3.23$, $p = 0.20$. One-hundred and thirty-five (97.1%) participants correctly indicated what the final payoff would be for ending up in first place, with no differences between rank conditions, $\chi^2(2) = 1.19$, $p = 0.38$. One-hundred and thirty-three (95.7%) participants correctly indicated what the final payoff would be for ending up in last place, with no differences between rank conditions, $\chi^2(2) = 3.74$, $p = 0.15$. One-hundred and thirty-three (95.7%) participants correctly indicated the range of bidding units that would be allocated to them in the bidding task, with no differences between rank conditions, $\chi^2(2) = 0.99$, $p = 0.61$. And finally, one-hundred and two (73.4%) participants correctly indicated how many rounds they should have played in the bidding task, with no differences between rank conditions, $\chi^2(2) = 4.34$, $p = 0.11$.

Fig. 5. Percentages of unethical behavior (Study 5).

nificant difference in unethical behavior between the bottom (53.1%) and intermediate (32.6%) ranks, $Wald = 3.98$, $p < 0.05$, and the top (56.8%) and intermediate ranks, $Wald = 5.22$, $p = 0.02$, but not between the bottom and top ranks, $Wald = 0.13$, $p = 0.72$ (see Fig. 5).

8.3. Discussion

Consistent with Study 4 and in support of Hypothesis 4, the results of Study 5 support our prediction that extrinsically-valuable top and bottom ranks elicit more unethical behaviors than intermediate ranks. Primarily, these results support our earlier findings that the valuable ranking standards influence individuals' unethical intentions and extends these findings by demonstrating that these valuable standards also influence actual unethical behaviors. In contrast to Study 4, however, the results of Study 5 do not indicate that extrinsically-valuable bottom ranks (i.e., those accompanied by punishments) elicit more unethical behaviors than extrinsically-valuable top ranks (i.e., those accompanied by rewards). One potential explanation for this discrepancy could lie in the framing of the extrinsic value of the ranks (cf. Higgins, 1997); with the current framing, all participants could receive a €4 bonus (i.e., a gain), which could either be doubled when ending up in first place (i.e., a larger gain), or be removed when ending up in last place (i.e., a non-gain). Previous research has demonstrated that non-gains are typically less motivating than gains (Higgins, 1997), thereby causing non-gains to motivate fewer unethical behaviors compared to gains (Vriend, Jordan, & Janssen, 2013). More importantly, however, is that this non-gain frame is not equivalent to the loss frame that prospect theory describes (Kahneman & Tversky, 1979), meaning that this lack of loss frame for bottom ranks with additional extrinsic value is unlikely to motivate individuals to engage in more unethical behaviors at the same level as when there was a more explicit loss (as was true in Study 4) (cf. Kern & Chugh, 2009).

9. Study 6: Mechanisms of unethicality at both ends of the ranking spectrum

The primary goal for Study 6 was to investigate the mechanisms behind why those at the top and the bottom had the greatest intentions to act unethically. As proposed earlier, we expected that perceptions of power explain why those in top positions (Hypothesis 5) and moral rationalizations explain why those in bottom positions act unethically (Hypothesis 6).

9.1. Methods

9.1.1. Participants and design

Three hundred and three United States residents ($M_{age} = 30.16$, $SD_{age} = 9.33$, 36% female) were recruited through Mturk. They were paid \$0.50 for their participation. We told participants that we were investigating how personality characteristics influence the decisions that people make. Participants were randomly assigned to one of fifteen experimental conditions in a 5 (Scenario) $\times$ 3 (Rank: bottom vs. intermediate vs. top) between-subjects design.

9.1.2. Procedure

Procedures were identical to Study 4, with three exceptions. First, we only focused on ranks with additional extrinsic value. Second, we made rank a between-subjects factor, which allowed us to assess individuals' unethical intentions for each of the three ranks in itself, rather than relative to each other as a direct comparison. Third, we measured participants' perceptions of power and moral rationalizations.

9.2. Measures

9.2.1. Perceptions of power

Perceptions of power were measured by asking participants how much power (1 = no power at all, 7 = a lot of power) and control (1 = no control at all, 7 = a lot of control) they believe they had in the situation ($\alpha = 0.80$) (adapted from Jordan, Sivanathan et al., 2011; Lammers, Dubois, Rucker, & Galinsky, 2013).

9.2.2. Moral rationalizations

To assess moral rationalizations, we asked participants to indicate their agreement (1 = fully disagree, 7 = fully agree) with eight statements that reflected moral rationalizations (see Appendix D) ($\alpha = 0.96$). These moral rationalizations were based on the moral disengagement characteristics and measure as described and established by Moore et al. (2012).

9.2.3. Unethical intentions

As done in the previous three studies, participants were asked how likely (1 = very unlikely, 7 = very likely) they would be to engage in the specified unethical behavior for the specific rank (depending on the rank condition).

9.3. Results

To assess whether moral rationalizations and perceptions of power (simultaneously) mediated the relationship between rank and unethical intentions, we conducted a multicategorical analysis following the procedures described by Hayes and Preacher (2013). This analysis allowed us to assess whether the mean differences of unethical intentions as a result of the ranking conditions (i.e., bottom vs. intermediate, bottom vs. top, and intermediate vs. top) could be explained by the mean differences in perceptions of power and moral rationalizations. We conducted multiple mediation analyses using Hayes' (2013) SPSS PROCESS macro, in which we included two dummy variables for the three ranks (with bottom rank as the reference point) as independent variables, perceptions of power and moral rationalizations as mediator variables, and unethical intentions as the dependent variable. Given the non-significant interaction effect of scenario for all variables and the difficulty of performing moderated-mediation analyses with multicategorical variables (Hayes & Preacher, 2013), we disregarded scenario as a (moderator) variable in our mediation analyses. We considered the bootstrapped confidence intervals at (90%) 95% of the indirect effects as indicators of the (marginal) significance of the indirect effects.

Table 1
Ordinary least squares regression model coefficients (Study 6).

	Perceptions of power	Moral rationalizations	Unethical intentions	
	Model 1a	Model 2a	Model 3a	Model 4a
Constant	4.76*** (0.13)	3.65*** (0.17)	4.27*** (0.21)	0.18 (0.30)
Rank: bottom ^a vs. intermediate	−0.09 (0.19)	−0.62* (0.25)	−1.64*** (0.30)	−1.03*** (0.18)
Rank: bottom ^a vs. top	0.52** (0.19)	−0.43† (0.25)	−0.62* (0.30)	−0.30 (0.18)
Perceptions of power				0.12* (0.06)
Moral rationalizations				0.96*** (0.04)
R ²	0.04**	0.02*	0.09***	0.69***
	Model 1b	Model 2b	Model 3b	Model 4b
Constant	4.48*** (0.13)	3.03*** (0.17)	2.63*** (0.21)	−0.85*** (0.21)
Rank: intermediate ^a vs. bottom	0.09 (0.19)	0.62* (0.25)	1.64*** (0.30)	1.03*** (0.18)
Rank: intermediate ^a vs. top	0.61** (0.19)	0.19 (0.25)	1.02*** (0.30)	0.76*** (0.18)
Perceptions of power				0.12* (0.06)
Moral rationalizations				0.96*** (0.04)
R ²	0.04***	0.02*	0.09***	0.69***

Notes. Standard Errors in Parentheses. Models 1a–4a have bottom ranks as reference point for dummy variables and Models 1b–4b have intermediate rank as reference point for dummy variables.

^a Reference point for dummy variables coded as “0” (reference category) versus “1” (non-reference category).

† $p < 0.10$.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

9.3.1. Perceptions of power

An analysis of variance on perceptions of power revealed main effects of rank, $F(2,288) = 18.33$, $p < 0.001$, $\eta_p^2 = 0.11$, and scenario, $F(4,288) = 7.37$, $p < 0.001$, $\eta_p^2 = 0.09$, but no interaction between the two, $F(8,288) = 1.16$, $p = 0.32$, $\eta_p^2 = 0.03$. As expected, regression analyses (see Table 1, Model 1a and 1b) revealed that top ranks ($M = 5.28$, $SD = 1.19$) elicited higher perceptions of power than bottom ($M = 4.76$, $SD = 1.37$), $B = 0.52$, $p < 0.01$, or intermediate ranks ($M = 4.68$, $SD = 1.40$), $B = 0.61$, $p < 0.01$, and that intermediate and bottom ranks did not differ from each other, $B = -0.09$, $p = 0.64$.

9.3.2. Moral rationalizations

An analysis of variance on moral rationalizations revealed main effects of rank, $F(2,288) = 3.79$, $p = 0.02$, $\eta_p^2 = 0.03$, and scenario, $F(4,288) = 14.18$, $p < 0.001$, $\eta_p^2 = 0.17$, but no interaction between the two, $F(8,288) = 1.17$, $p = 0.32$, $\eta_p^2 = 0.03$. As expected, regression analyses (see Table 1, Model 2a and 2b) revealed that bottom ranks ($M = 3.65$, $SD = 1.65$) elicited more moral rationalizations than intermediate ranks ($M = 3.03$, $SD = 1.77$), $B = -0.62$, $p = 0.01$, and marginally more than top ranks ($M = 3.22$, $SD = 1.81$), $B = -0.43$, $p = 0.08$, and that top and intermediate ranks did not differ from each other, $B = 0.19$, $p = 0.44$.

9.3.3. Unethical intentions

An analysis of variance on unethical intentions revealed main effects of rank, $F(2,288) = 16.44$, $p < 0.001$, $\eta_p^2 = 0.10$, and scenario, $F(4,288) = 9.56$, $p < 0.001$, $\eta_p^2 = 0.12$, but no interaction between the two, $F(8,288) = 0.72$, $p = 0.67$, $\eta_p^2 = 0.02$. Consistent with Hypothesis 4, regression analyses (see Table 1, Model 3a and 3b; Fig. 6) revealed that bottom ($M = 4.27$, $SD = 2.13$), $B = -1.64$, $p < 0.001$, and top ranks ($M = 3.65$, $SD = 2.22$), $B = 1.02$, $p < 0.001$, elicited more unethical intentions than intermediate ranks ($M = 2.63$, $SD = 2.05$). Furthermore, we found that bottom ranks elicited more unethical intentions than top ranks, $B = -0.62$, $p = 0.04$.

9.3.4. Mediation analysis

Consistent with Hypothesis 5, results indicated that the mean difference in unethical intentions between the bottom and top ranking conditions was (marginally) mediated by moral rational-

Fig. 6. Means for unethical intentions (Study 6). Note: Error bars represent standard errors.

izations ($effect = -0.45$) and mediated by perceptions of power ($effect = 0.06$). And by changing the dummy variable referent to intermediate ranks, results indicated that the mean difference in unethical intentions between the intermediate and top ranks was not mediated by moral rationalizations ($effect = 0.19$), but was mediated by perceptions of power ($effect = 0.07$). And as predicted by Hypothesis 6, results indicated that the mean difference in unethical intentions between the bottom and intermediate ranking conditions was mediated by moral rationalizations ($effect = -0.60$) but not perceptions of power ($effect = -0.01$). See Table 2.

9.4. Discussion

Consistent with the results of Studies 4 and 5 and in support of Hypothesis 4, the results of Study 6 demonstrate that competing to attain extrinsically-valuable top ranks or avoid extrinsically-valuable bottom ranks elicit more unethical intentions than competing to attain intermediate ranks. Furthermore, consistent with the results of Study 4, Study 6 also demonstrates that competing to avoid extrinsically-valuable bottom ranks elicits more unethical intentions than competing to attain extrinsically-valuable top ranks (cf. prospect theory; Kahneman & Tversky, 1979). In

Table 2
Bootstrapped confidence intervals for indirect effects (Study 6).

	Effect	90% CI		95% CI	
		LL	UL	LL	UL
	<i>Indirect effect of perceptions of power</i>				
Rank: bottom ^a vs. intermediate	−0.01	−0.07	0.02	−0.08	0.03
Rank: bottom ^a vs. top	0.06 [†]	0.02	0.14	0.01	0.16
Rank: intermediate ^a vs. top	0.07 [†]	0.02	0.16	0.01	0.18
	<i>Indirect effect of moral rationalizations</i>				
Rank: bottom ^a vs. intermediate	−0.60 [†]	−0.97	−0.22	−1.06	−0.16
Rank: bottom ^a vs. top	−0.45 [†]	−0.80	−0.03	−0.87	0.03
Rank: intermediate ^a vs. top	0.19	−0.21	0.59	−0.29	0.66
	<i>Total indirect effect</i>				
Rank: bottom ^a vs. intermediate	−0.61 [*]	−0.99	−0.21	−1.08	−0.15
Rank: bottom ^a vs. top	−0.35	−0.75	0.05	−0.83	0.12
Rank: intermediate ^a vs. top	0.26	−0.15	0.68	−0.23	0.76

Notes. Bootstrapped in 10,000 iterations.

^a Reference point for dummy variables coded as “0” (reference category) versus “1” (non-reference category), CI = Confidence Interval, LL = Lower Limit, UL = Upper Limit.

[†] $p < 0.10$.

^{*} $p < 0.05$.

addition, the results of Study 6 demonstrate that the differences in unethical conduct can be explained by perceptions of power and moral rationalizations. Specifically, we find that individuals competing to attain extrinsically-valuable top ranks have stronger unethical intentions than individuals competing to attain intermediate ranks because of their higher perceptions of power (Hypothesis 5). This effect is consistent with our argument that perceptions of power release individuals' ethical inhibitions, freeing them to engage in unethical behaviors (e.g., Emerson, 1962; Galinsky et al., 2003; Keltner et al., 2003; Lammers et al., 2010). In addition, we find that individuals competing to avoid bottom ranks with undesirable extrinsic consequences (i.e., punishments) have greater intentions to act unethically than do individuals competing to attain top ranks and intermediate ranks because they are more likely to morally rationalize the unethical behaviors (Hypothesis 6). This finding supports our contention that while people competing at the bottom do not have the psychological release mechanism to act unethically that power affords, they harness their disadvantaged position and strong desire to avoid the punishments that accompany being in bottom ranks by rationalizing their immoral behavior.

10. General discussion

Previous research on ranking theory has shown how proximity to valuable ranks motivates individuals to either compete or cooperate with their commensurate rivals (Garcia et al., 2006, 2013). In the current investigation, we aimed to extend this research by examining when, why, and how proximity to valuable ranks lead people to consider unethical behavior as a means to attain or avoid these ranks. Across six studies, we demonstrated that the intrinsic and additional extrinsic values of ranks influence the degree to which individuals consider and engage in unethical behaviors. First, we found that when merely considering the intrinsic value of ranks – that is, ranks void of any additional rewards or punishments – individuals were most willing to engage in unethical intentions (Study 1) and behaviors (Study 2) when competing to attain top ranks, rather than to attain intermediate ranks or avoid bottom ranks. We found these effects to be true for unethical intentions even when considering ranks that were proximal to the top (e.g., second and third place) and bottom (e.g., third-to-last and second-to-last place) (Study 3). In concert, Studies 1 through 3 demonstrated that unethical intentions and behaviors increased with the unidirectional drive upwards and the proximity to valuable ranks.

Second, we found that when we applied additional extrinsic value to top and bottom ranks by associating rewards with top ranks and punishments with bottom ranks, bottom ranks elicited higher unethical intentions than bottom ranks with mere intrinsic value (Study 4), but that top ranks with additional extrinsic value did not elicit higher unethical intentions than top ranks with mere intrinsic value. Furthermore, we found that individuals who competed to attain top ranks with rewards or avoid bottom ranks with punishments were more willing to engage in unethical intentions (Study 4) and behaviors (Study 5) than individuals competing to attain intermediate ranks. Studies 4 and 5, therefore, demonstrated that the value of ranks could be altered through adding extrinsic rewards and punishments and that the proximity to these extrinsically-valuable ranks further motivated unethical intentions and behaviors. Furthermore, we found that individuals competing to attain or avoid different ranks harnessed different mechanisms to psychologically release themselves from their ethical inhibitions; individuals competing to attain top ranks were ‘released’ to consider unethical behaviors because of elevated perceptions of power, whereas individuals competing to avoid bottom ranks were ‘released’ to consider unethical behaviors because of an increase in moral rationalizations (Study 6).

10.1. Theoretical implications

Our theoretical and empirical findings have implications for various streams of literature. First, our findings corroborate the main theoretical assumption of ranking (Garcia et al., 2006): competition increases with the proximity to valuable ranks. As an extension to this work, we demonstrate that proximity to valuable ranks not only evokes competition and cooperation (e.g., Chen et al., 2012; Garcia et al., 2006, 2010, 2013; Poortvliet et al., 2009), but also evokes unethical intentions and behaviors. Furthermore, we specifically expand upon Poortvliet (2013), who demonstrated that rankings interact with performance and mastery achievement goals to motivate interpersonally-harmful behaviors, to show that they also motivate unethical behaviors. Our results suggest that at least when people are in particular positions in the ranking spectrum, unethical intentions and behaviors are sometimes considered to be a more effective and efficient alternative to other behaviors being within the ‘rules of the game’. In this influence, our findings also contribute to the more general literature on ethical decision-making (e.g., Tenbrunsel & Smith-Crowe, 2008; Treviño et al., 2014) by demonstrating that individuals use unethical behaviors to realize outcomes that they otherwise would

not have attained, or to at least attain these outcomes in a more resource-efficient manner (cf. Gino, Schweitzer, Mead, & Ariely, 2011; Mead, Baumeister, Gino, Schweitzer, & Ariely, 2009; Ordóñez et al., 2009; Schweitzer et al., 2004).

Besides the notion that unethical conduct increases with the proximity to valuable ranks, in light of ranking theory, these results corroborate the notion that top ranks possess intrinsic value because they represent a ubiquitous standard that individuals want to attain. Additionally, our results demonstrate that other ranks can be endowed with extrinsic value, provided that they are associated with rewards or punishments. This implies that while top ranks will always elicit unethical conduct due to their intrinsic value (cf. Studies 1 through 3) and when accompanied by additional extrinsic value (cf. Studies 4 through 6), other ranks, such as bottom ranks, also have the potential to elicit unethical conduct - provided that they are endowed with extrinsic value. Given this influence of extrinsic value through rewards and punishment, on a more general level these results correspond with earlier research on framing of rewards or punishments (e.g., Becker, 1968; Gino & Margolis, 2011; Hegarty & Sims, 1978; Lewicki, 1983) by showing that the positive and negative consequences of a prospective outcome is a determinant of an individual's decision to act unethically.

Related to these implications is our unexpected finding that punishments can (cf. Studies 4 and 6) but do not necessarily have to (cf. Study 5) evoke more unethical conduct than rewards. More specifically, we found that punishments sparked more unethical intentions but not more behaviors. These findings can perhaps be explained by prospect theory (Kahneman & Tversky, 1979), which asserts that individuals are more willing to engage in unethical behaviors to avert losses than they are to achieve gains (Kern & Chugh, 2009). Our research replicates and extends these findings in the domain of rankings, by demonstrating that the desire to avoid bottom ranks elicits more unethicality than the desire to attain top ranks (cf. Studies 4 and 6) - but not when actual unethical behavior is involved (cf. Study 5). One explanation of this result could be that we framed the bottom condition of Study 5 as a non-gain (i.e., not receiving a bonus) rather than a loss frame (e.g., losing one's bonus), thereby not activating prospect theory's purported loss aversion motivation (Kahneman & Tversky, 1979; Kern & Chugh, 2009). Another more fundamental explanation involves the fact that individuals with unethical intentions do not always engage in unethical behaviors (Tenbrunsel & Smith-Crowe, 2008; Treviño et al., 2014). We believe that this result could potentially lie with the two psychological 'releasers' of ethical inhibitions that we have used in this investigation: perceptions of power and moral rationalizations.

In terms of perceptions of power, the current findings support earlier research, which demonstrates that feelings of power can elicit unethical conduct (e.g., DeCelles, DeRue, Margolis, & Ceranic, 2012; Yap, Wazlawek, Lucas, Cuddy, & Carney, 2013). This is mainly due to power's ability to activate the possessor and release his or her inhibitions (Galinsky et al., 2003; Keltner et al., 2003). Within the context of the current research, this means that those with perceptions of power would not only have the intention to act unethically, but also be in the state of behavioral activation necessary to actually do it (e.g., Lammers, Stoker, Jordan, Pollmann, & Stapel, 2011; Yap et al., 2013). These dual forces may be absent for moral rationalizations. That is, although these moral rationalizations can psychologically release individuals from their ethical inhibitions (e.g., Aquino et al., 2007; Bandura et al., 1996; Beu & Buckley, 2004), breeding an intention to act unethically, this may be insufficient to motivate actual unethical behavior.

Our findings also contribute to earlier research on rank-order length (e.g., Garcia & Tor, 2009; Tor & Garcia, 2010) - that is, the

number of competitors that are in play. This stream of research has found that competition amongst individuals decreases as the total number of competitors in the ranking increases. In Studies 1 through 6, we used various scenarios and setups that differed not only in content, but also in the number of competitors. This might be an indication that, although rank order length may influence the degree of competition *in general*, it does not alter the value of the rank. More specifically, the inclusion of more competitors may make certain ranks, such as top and bottom ranks, more valuable across the board, but it does not appear to lead to a larger increase of one value relative to another.

10.2. Organizational implications

As noted earlier, rankings are prevalent in a wide variety of (organizational) settings (Garcia et al., 2006). The current research demonstrates that rankings can elicit the worst out of competitors via unethical behavior. In accordance with the definition of rankings, rankings can only maximally operate when they are based on the legitimate performance of all individuals involved. If these individuals are able to illegitimately enhance their performance through a wide variety of unethical behaviors, this threatens the legitimacy of the rankings. Recent scandals in sports and business have aptly demonstrated the detrimental effects of unethical individuals on rankings. If rankings are to be maintained as a useful tool for eliciting competition and cooperation, unethical conduct must be kept to a minimum.

One of the main issues related to unethical conduct is that it shares many of its determinants with desirable competitive motivations and behaviors. As such, any attempt to reduce unethical conduct through these shared antecedents is also likely to reduce desirable competitive motivations and behaviors (Ordóñez et al., 2009) - creating a sort of paradox. It is most likely that unethical behavior will occur when its potential benefits outweigh its potential costs (Becker, 1968; Lewicki, 1983). As a reduction in potential benefits of the unethical behaviors will also reduce positive in-role behaviors, such as general performance, competition, and cooperation, it may be more prudent to increase the potential costs of unethical behaviors through, for example, sanctions (see Balliet, Mulder, Lange, & Paul, 2011 for a recent meta-analysis on the topic). Such a system could also peg the costs involved with punishments to the value and desirability of ranks; individuals may be inhibited from engaging in such conduct when organizations make it more costly to engage in unethical behavior to attain more valuable ranks.

Another means of tackling unethical behavior is through our proposed mediating mechanisms: higher perceptions of power for those at the top and greater moral rationalizations for those at the bottom. First, our results suggest that elevated perceptions of power cause individuals in top ranks to become more willing to engage in unethical behavior than those in intermediate ranks. Although it would imaginably be difficult to alter these perceptions, previous research has found boundary conditions under which the effects of power on unethical behavior are reduced (e.g., Chen, Lee-Chai, & Bargh, 2001; Keltner et al., 2003). One such boundary condition is accountability; individuals with elevated perceptions of power are more sensitive to social consequences, and hence less likely to act unethically, when they believe that they will be held accountable for their actions (Lerner & Tetlock, 1999). Another potential boundary condition is the relative stability of the top rank; research has shown that those with elevated perceptions of power perceive fewer degrees of freedom when their power base is unstable (Jordan, Sivanathan et al., 2011). Within the present ranking context, this would imply that decreasing the stability by which individuals can maintain top ranks possibly can also reduce their motivations to behave unethically.

Second, through our moral rationalizations mechanism, individuals could be made aware of the strict unethical qualification of the behavior, thereby creating a moral awareness that could inhibit individuals from morally rationalizing this behavior (Bandura et al., 1996; Reynolds, 2006).

10.3. Limitations and future research directions

One limitation of the current investigation is that we only examined (and argued) for the mediating effects of power and moral rationalizations when top and bottom ranks were accompanied by additional extrinsic value. Without such extrinsic value, the mediating effects of these variables could be altered – particularly so for moral rationalizations. For perceptions of power, top ranks elicit greater perceptions of power because they enable access to resources that other ranks do not afford (e.g., Anderson et al., 2008; Cheng et al., 2010; Driskell, 1982; Henrich & Gil-White, 2001; Homans, 1950). As Studies 1 through 3 demonstrate, however, top ranks possess intrinsic value that makes them worth competing for. Thus, it is possible that the intrinsic value of top ranks is sufficiently empowering, regardless of the extrinsic value associated with top ranks. In contrast, for moral rationalizations, because bottom ranks have less intrinsic value than top ranks, individuals would have no reason to avoid bottom ranks in and of themselves, meaning that they have no need to morally rationalize potential unethical behaviors simply because they are unlikely to engage in such behaviors. Future research should explore the roles of these purported mechanisms when merely considering the intrinsic value of ranks.

Another limitation is that we did not explore the (moderating) effects of individual differences on the effects of rank on unethical intentions and behaviors. Previous research has shown that individual achievement goals influence the interpretation of the value of specific ranking standards (Poortvliet, 2013; Poortvliet et al., 2009), and the degree to which individuals compete for them (Garcia et al., 2013). Individuals who are mainly focused on outperforming others (i.e., a performance achievement goal), for instance, find bottom ranks to be more meaningful than individuals who are mainly focused on improving themselves (i.e., a mastery achievement goal) (Poortvliet et al., 2009), which should make the former more likely to entertain the possibility of acting unethically (cf. Poortvliet, 2013). Other research, furthermore, suggests that individuals can vary in their sensitivity to rewards and punishments (Higgins, 1997). Individuals with a promotion focus, for instance, may be more prone to taking risks if this allows them to guarantee the additional positive consequences of top ranks (cf. Gino & Margolis, 2011), whereas those with a prevention focus may be less likely to do so. Additionally, personality characteristics can also influence the effect of meaningful ranking standards on unethical conduct through our two proposed explanatory mechanisms of perceptions of power and moral rationalizations. For example, some individuals are more prone than others to experience the psychological and behavioral effects of power (Mehta, Jones, & Josephs, 2008). Furthermore, research has shown that individuals vary on their tendencies to morally rationalize (Moore et al., 2012), meaning that some individuals may be more likely than others to act unethically when they are competing to avoid bottom ranks.

A final limitation lies in the fact that we did not provide any information with regards to rival and rivalry characteristics. Previous research on social comparisons has shown that characteristics such as rival similarity and relationship closeness influence the degree of competition between rivals (Garcia et al., 2013). Related is the fact that we focused on unethical conduct when individuals were tied for a rank with an unspecified commensurate rival. Previous research has shown that the positioning of the rivals – being

positioned above a rival (i.e., an upward comparison) or below a rival (i.e., a downward comparison) – can influence rivalry perceptions and competitions (Dunn, Ruedy, & Schweitzer, 2012; Festinger, 1954; Maner & Gerend, 2007).

11. Conclusion

In conclusion, although various ranking characteristics may evoke a motivational drive that is necessary for competition to occur and performance to flourish, these characteristics may also sway individuals to consider unethical alternatives. When individuals engage in such unethical alternatives, they circumvent the basic principle on which rankings are based: a 'fair' rank order of individuals on some relevant performance dimension. In such cases of unethical conduct, rankings may lose their inherent value. Given the prevalence of rankings within modern (organizational) life, it is important to better understand when, why, and how rankings stimulate unethical behavior.

Appendix A. Supplementary material

Supplementary data associated with this article can be found, in the online version, at <http://dx.doi.org/10.1016/j.obhdp.2016.09.003>.

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