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What happens when there is an “I” in team? An investigation of status and efficiency

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What happens when there is an “I” in team? An investigation of status and efficiency

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I. Introduction

Many organizations match employees to work on specific projects as members of a team. However, one’s status within the organization, and related issues like pay, promotion, and bonuses, depend heavily on one’s performance relative to others. Thus, even though “teams” are supposed to work together for the benefit of the firm, a less than optimal outcome may emerge when individuals within the group are more concerned with their own status relative to other teammates. Suppose a roadblock emerges as a two-person group moves to complete a project. Each member of the group comes up with a different solution, both of which will lead to success of the project. However, one of the solutions is superior for the firm along some metric, such as a higher profit margin or lower utilization of resources. The workers must coordinate to complete the project, but which outcome will eventually come to pass? Obviously the employer would prefer to elicit the superior outcome, but individuals on the team may lead to a suboptimal outcome, particularly if status plays a role in determining the outcome of the game. Understanding how status relates to outcomes within a team is our focus in this paper, both theoretically and experimentally.

Coordination requires an understanding of what others are likely to do and thus what one should do (see Camerer, 2003 for examples as well as a complete review of coordination). Coordination is easier when people can communicate (Finkel, Campbell, Brunell, Dalton, Scarbeck, & Chartrand, 2006; Schelling, 1960) or, in the absence of communication, when there is a focal point, which Schelling (1960) explained as an available choice that is salient enough to stand out among all other available choices such that those trying to coordinate are more likely to choose it. One such focal point is status: specifically, in tacit coordination decisions (defined as those that are conscious but without communication) with asymmetric payoffs, an explicit status difference between two individuals trying to coordinate becomes a

focal point with both choosing the asymmetric option preferred by the higher status individual (de Kwaadsteniet, van Dijk, 2010).

We describe two types of individuals. A *teammate* is one whose best response is what is best for the firm—the superior outcome—regardless of which member of the group came up with the idea. Teammates are typically collaborative and work towards a common goal; usually, achieving the best collective outcome (Miller & Hamblin, 1963), allowing the group to coordinate on the superior, or Pareto optimal, outcome. A teammate who has the successful, but less superior, solution does not resent proceeding with the solution proposed by the other group member. There is cooperation so that members do well together (Hogg and Levine, 2010) and a willingness to engage in a team effort to support a common goal (Kaplan and Norton, 2001).

A *competitor* favors his own winnings over the collective gain of his team. Competitors have a best response that is governed more by relative ranking and maintenance of that ranking (Garcia & Avishalom, 2007). If a competitor with higher status has the superior idea, the group coordinates on the Pareto optimal outcome, just the same as the teammates. However, if a competitor with lower status presents the superior outcome, the high status competitor's solution may be forced upon the team. Coordination will occur, but at a less than optimal outcome. The competitor may maximize his own *relative* payoff, even if it costs him in absolute terms (Malhotra, 2010) and such rivalry may lead to economically inefficient behavior (Kilduff et al, 2010).

How does status influence the outcome of a coordination game? Can an employer manipulate the acquisition of status to maintain a workforce filled with team players? We present a game theoretic model, using a modified Stag Hunt game, to show how status affects the choice of focal point and outcome of the game. Then, with laboratory experiments, we first establish status by using a manipulation task among two persons in a group. This manipulation task conditioned players to be either a teammate or a competitor, and established relative status by calling out a winner and a loser of the task. These persons are then asked to complete a coordination game, with payouts similar to a Stag Hunt. When players are conditioned to be teammates, the focal point is the Pareto optimal outcome. However,

when players are conditioned to be competitors, the focal point changes, and may be a successfully coordinated, but inefficient, outcome.

Further, the status effects are specific to the relationship. When a “winner” is paired with a different “loser,” even the competitors respond like teammates and coordinate on the superior outcome. This suggests that status effects are short-lived, or non-transferable. This theory and evidence leads us to suggest that for industries where teams are utilized to complete tasks, status effects can be detrimental to the firm’s bottom line. A simple solution is to mix up members of a group, to reset status effects, or to condition members of the group with team building activities prior to the start of a new project.

II. The Effect of Status

Status is a valued outcome within a social structure (Weber, 1946), and people are usually quick to figure out who has higher status in a group, as well as being quite accurate about their own status (Berger, Fisek, Norman, & Zelditch, 1977; Anderson, Srivastava, Beer, Spataro, & Chatman, 2006). It is a relative ranking (Ridgeway & Walker, 1995; Weber 1946) or a position within a social relationship (Linton, 1936; Gottfreid, 1956; Bales, Strodtbeck, Mills & Rosenborough, 1951). Thus, people are expected to act in keeping with their status with certain benefits accruing to those at an explicitly higher status. These include: being offered more in an ultimatum game (Ball and Eckel, 1998), being recipients of greater generosity (Ellemers and Van Rijswijk, 1997), and receiving better performance evaluations (Berger, Rosenholtz & Zelditch, 1980), higher compensation (Belliveau, O’Reilly & Wade, 1996), and positive resource allocations (Bales, 1958; Bunderson, 2003). Further, lower status individuals are expected to follow the preference of a higher status individual (Keltner, Grunfeld, & Anderson, 2003).

We posit that this social norm will be followed even when the status difference is minimal, with the likelihood being greater when status is a defining feature of the relationship-at-hand. Past research has found that status serves as a focal point when the payoffs or outcomes from coordination are asymmetric such that one option is clearly more beneficial to the higher status person (de Kwaadstenet and van Dijk, 2010). We argue however, that even with symmetric payoffs, when the status difference is

important to the relationship, the higher status person will prefer the choice that maintains the status difference and the lower status person will defer to that choice. Thus teammates will ignore status while competitors will not, independent of the nature of payoffs. This would also be in keeping with System Justification Theory (Jost & Banaji, 1994; Jost, Banaji & Nosek, 2004), which posits that people are motivated to justify their existing social structures and hierarchies even at the cost of continuing a system that provides them with reduced economic benefits.

What does it take for status to have an effect on decision-making? Consider the “minimal group effect” as an analogy. In their classic research, Tajfel and his colleagues (Tajfel, 1970; Tajfel, Billig, Bundy, Flament, 1971; Tajfel & Turner, 1979) found that assignment to different groups based on trivial and irrelevant differences resulted in large differences in behavior, with individuals showing strong in-group bias and favoritism. Might there also be a “*minimal status effect*” where a minimal manipulation of status between two people, who are otherwise in a position of equality, influences subsequent choices and behavior?

For there to be a minimal manipulation of status, individuals have to perceive that they are equals prior to the difference being introduced (peers in a social hierarchy), and the difference has to be based on something that is irrelevant to the actual decision on-hand, but is perceived as being legitimate. In addition, status has to matter to the relationship *per se*. In this paper, we demonstrate the effect of such a minimally manipulated status on coordination decisions: what we will call the “*minimal status effect*.”

III. The Stag Hunt Game

The Stag Hunt game is a parable about potential coordination failure, attributed to Jean-Jacques Rousseau in *A Discourse in Inequality* (1755),

If it was a matter of hunting a deer, everyone will realize that he must remain faithful to his post; but if a hare happened to pass within reach of one of them, we cannot doubt that he would have gone off in pursuit of it without scruple and, having caught his own prey, he would have cared very little about having caused his companions to lose theirs.

The dilemma is that taking down the stag requires cooperation and yields a superior payoff, but one can feed himself with a hare. The typical game is presented in Figure 1.

Figure 1: Basic Stag Hunt

		Player 2	
		Stag	Hare
Player 1	Stag	4, 4	0, 3
	Hare	3, 0	2, 2

The outcome preferred by all hunters is the optimal cooperative outcome, or that which is Pareto efficient. Pareto efficiency is an outcome where no player can be made better off without making any player worse off. A game like the Stag Hunt (Figure 1) has two pure strategy Nash Equilibriums, either (Stag, Stag) or (Hare, Hare) where players coordinate on the same strategy. However, only one of these equilibriums is Pareto efficient. If both players choose Hare, there is an improvement that makes both players better off, with both players choosing Stag. Nash’s basic theory cannot determine which outcome is likely, and economists have argued over which equilibrium is rational.

Schelling’s (1960) discussion of focal points led to controversy over which of the two Nash Equilibriums was more likely. Harsanyi and Selten (1988) defined an outcome with coordination on Stag as “payoff-dominant” and coordination on Hare as “risk-dominant.” Payoff-dominance requires that payoffs, as defined in Figure 2, have the properties $A > B$ and $D > C$ for Player 1 and $a > b$ and $d > c$ for Player 2. To be risk-dominant, the payoffs must be such that $(C - D)(c - d) \geq (B - A)(b - a)$. A strict inequality in this case means that players have a larger incentive to play Hare.

Figure 2: Risk- and Payoff-Dominance

		Player 2	
		Stag	Hare
Player 1	Stag	A, a	C, b
	Hare	B, c	D, d

Harsanyi and Selten (1988) modeled the case for the payoff-dominant strategy. Further, Anderlini (1999) found that same outcome when communication was allowed. Experimental evidence was also put forth to support the payoff-dominant focal point when Rankin, Van Huyck and Battalio (2001) used experiments to show that “behavior is consistent with efficiency rather than security or risk dominance.” Battalio, Samuelson, and VanHuyck (2001) use laboratory experiments to show that the Pareto efficient outcome is more likely when the optimization premium – the difference between the payoff of the best response to an opponent’s strategy and the inferior response – is small.

However, there is also support for the risk-dominant strategy. Carlsson and van Damme (1990) and Harsanyi (1995) provide models that suggest the risk-dominant outcome will prevail. Cooper et al (1990) show that the experimental outcome is not always the Pareto optimal, and Van Huyck et al (1990) find that the payoff dominant equilibrium is “extremely unlikely” as players find the payoff dominant action is too risky to choose.

Given the theoretical and experiment uncertainty over risk-dominance and payoff-dominance, we arrange the game even further in favor of the Pareto optimal solution. We make a small change to the game, seen in Figure 3, to minimize the likelihood for the risk-dominant strategy. The payoffs for both coordinated outcomes remains unchanged, but a change to the uncoordinated payoffs makes coordination on Hare no longer a risk-dominant outcome. Thus, if competitors coordinate on the sub-optimal choice in this setting, it is clear that status effects are important in choosing a focal point.

Figure 3: Modified Stag Hunt

		Player 2	
		Stag	Hare
Player 1	Stag	4, 4	1, 2
	Hare	2, 1	3, 3

Taking the literature on status into account, we posit that the competitors and teammates will have different strategies. A competitor’s best response will always be to follow the choice of the higher status individual, whether or not that is the superior choice. A teammate’s best response will be to choose

the Pareto-dominant solution. As explained in the next section, we will condition participants in an experiment to have a status ranking and be either a competitor or a teammate. We expect that the experimental evidence will show that while teammates choose the first best option, the focal point of the competitors is based primarily on status.

IV. Experimental Methodology

Participants, who were scheduled using flyers and an on-line experimental sign-up system, were randomly linked in pairs (“*dyads*”), and dyads were randomly assigned either to the role of *teammates* or the role of *competitors*. They were not told which role they were given, this would be conditioned in the manipulation task. Dyads were then put through a series of tasks and questions, outlined in Figure 4, to determine their beliefs at each part of the experience. There were two major tasks, a manipulation task to divide participants by status (winner or loser) and role (competitor or teammate) and the second, coordination task played as a non-cooperative game similar to the modified Stag Hunt in payoffs. After each task, monetary payments were made to the players dependent on the outcome of the task. The questions, asked both before and after the coordination task, were designed to test how well participants were conditioned in the manipulation task and how they viewed their role with their dyad counterpart (teammate vs. competitor).

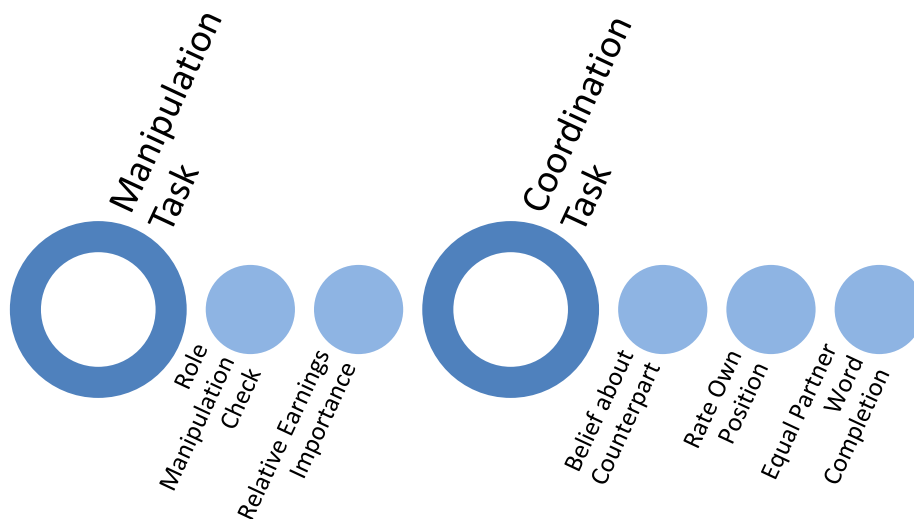


Figure 1: Timeline of tasks and manipulation checks

Then the dyads took part in a manipulation task to establish relative ranking of each member of the dyad. The manipulation task is based on standard methods used in past research to manipulate status: participants take part in a game or quiz and the highest scorer is declared the winner. The winner and the loser would psychologically experience being a winner and a loser. We used two different manipulation tasks to determine status. In Study 1, we ask players to unscramble neutral and identical sentences, and the player who unscrambled the most sentences was declared the winner. One might argue, however, that unscrambling sentences correctly is a skill-based task, and thus the loser may be making a skill-based association, i.e., the loser is assuming that the winner has additional skills that make him or her better qualified. In Study 2, the task was a card game, based solely on luck, such that getting the position of winner or loser was by accident, rather than being about skill. Participants turned over the top card from a deck of cards that they had been allowed to shuffle, until one of them upturned two “10” cards (the ace, face cards, and the number 10). The first participant to turn over two “10s” was declared the winner of the card game.

Once winners and losers were determined, the compensation method conditioned them as either *competitors* or *teammates*. In Study 1, players obtained 50 points for each correctly unscrambled sentence and 100 points equaled one dollar in earnings. For teammates, collective earnings, calculated by totaling points from both players, were split equally. For competitors, earnings were split based on proportion of points earned with the winner getting a bonus of \$2 and loser paying a penalty of \$2. There was a floor of zero such that the loser never incurred a personal loss.¹ In Study 2, the compensation mechanism for competitors was changed to a winner-take-all approach. The winner-take-all is a standard and common way of rewarding the victor in a competition (as in most sports tournaments, game shows, cooking challenges, and even the Republican Primary) and eliminates any formal endorsement by some authority figure (i.e., the experimenter) giving a bonus to the winner and a penalty to the loser, as was done in Study 1. For competitors, the winner of the card game and won \$5 while the loser received \$0.

¹ To break a tie, the dyad received an additional 10 seconds and the total number of sentences for the two time periods were looked at together to ascertain the winner and the loser. Less than 10% of the dyads in all the studies tied in the status manipulation task.

Teammates were not compensated based on a fixed pot of money because they needed to experience being part of team. For teammates, the total number of “10s” turned over by *both* players (which varied from 2 to 3) was then counted to calculate payment. Each “10” turned over was worth \$2. Teammates split the total earnings (which varied from \$4 to \$6) evenly. Participants were paid immediately upon completion of the task and had full information about the other player’s performance and payment.

After dyad members received their payouts, they were given a written scenario for the coordination game. Participants were told that one member of the dyad was the head of a Food channel while the other was the head of a Travel channel in a large media conglomerate that owned multiple TV channels. The two channels were creating a joint series about exotic foods from around the world. Participants were required to individually, *without any communication* with their dyadic counterpart, choose a project leader. If both participants chose the Food channel as the leader, they earned a greater collective (\$8) and individual benefit (\$4 each). Coordinating on the Travel channel led to the second highest payoffs (\$3 each) and non-coordination resulted in the two lowest payoffs. Non-coordinating dyad members received either \$2 or \$1 each based on their actual choice.

After describing the game, but prior to the task of choosing a leader, a role manipulation check took place. Participants were asked to rate how they felt about their counterpart in the task on a scale of 1 to 6 (1 = definitely competitor; 6 = definitely teammate). If the role manipulation task was successful, we would anticipate that those conditioned to be competitors would have a lower value than the teammates who split the joint earnings. To gain a measure of self-interest motives, we asked participants to rank their relative earnings importance. Participants were asked to split 100 points between the importance of their own earnings and the importance of their partner’s earnings, such that the points assigned conveyed the relative importance they would place on each of these elements in their decision. In addition, they provided their written uncensored thoughts.

Participants then played the coordination game by choosing either the Food channel or the Travel channel as the project leader, i.e., either themselves or their counterpart. This was immediately followed by a question about whom they thought their counterparts were likely to pick, which was rated on a 4-

point scale (1 = definitely me; 4 = definitely themselves). Based on pilot data (see Appendix), that correlated status measurement with a measure of position, participants were also asked to rate their own position on a 7-point scale (1 = very weak; 7 = very strong) where being in a weak position measures being at a lower status and being in a strong position measures being at a higher status. The use of the word status or its direct definition was avoided to ensure that the concept would not be inadvertently primed.

Participants also completed an implicit word completion task aimed at capturing the accessibility of concepts of *equality* and *partnership*: participants were given incomplete words (_ _ UAL and P _ _ _ _ ER) to complete. The possible completions, which were controlled for frequency of occurrence in the English language, can be thought of as equal status completions (EQUAL or PARTNER) or non-equal status completions (USUAL OR POINTER to name just two). Participants were then paid based on the outcome of the coordination game.

V. Results

A. Study 1: Skill-based manipulation and compensation with loser penalty

Sixty-six Columbia University students or thirty-three dyads (34 female, 30 male and 2 who did not report gender) participated in this study for compensation ranging from \$5.00 to \$14.50. All participants completed all the various questionnaires and followed instructions to not communicate with their dyadic counterparts, and thus were included in the final data set. Twenty-six participants were assigned to the teammate role and forty were assigned to the competitor role.

Participants were asked to rate how they felt about their counterpart in the task on a scale of 1 to 6 (1 = definitely competitor; 6 = definitely teammate). As expected, participants in the teammate role ($M = 4.42 \pm 0.24$)² thought of their counterparts more as teammates than participants in the competitor role ($M = 3.80 \pm 0.19$; $t(64) = 2.03$, $p < .05$). In addition, when asked to split 100 points between the importance of

² Parameter estimates are given along with their estimated standard errors in the form *estimate* \pm *standard error*.

their own earnings and the importance of their partner's earnings, teammates allocated more points to considering partner's earnings in their decision. The difference in means between the two roles was 9.73 ± 4.87 , which is statistically significant ($t(64) = 2.01, p < .05$). Thus, the manipulation task was successful in conditioning participants on their role of teammate or competitor.

As shown in Table 1 and as predicted, 100% of the dyads in the teammate role coordinated and did so on the mutually higher payoff (they chose the Food channel as the leader), while coordination in the competitor role was 60%, $X^2(1, N=25) = 6.77, p < .01$. In addition, all competitor dyads *coordinated on the winner of the manipulation task*, thus the competitor dyads that coordinated on the Travel channel left money on the table by selecting the non pareto-optimal solution.

Table 1: Coordination in Study 1, by Role

Number (%) of Dyads	Coordinate		Do Not Coordinate	
	Food (Mutually Highest Payoff)	Travel	Choose Self	Choose Other
Teammates	13 (100%) (8 winner)	0	0	0
Competitors	7 (35%) (7 winner)	5 (25%) (5 winner)	8 (40%)	0

In addition, competitor losers feel that their position or status is significantly weaker compared with teammate losers. Competitive losers thought competitor winners more likely to choose themselves as the leaders in the coordination task ($M = 3.00 \pm 0.18$), while winners did not have a definite view and were near the midpoint of 1-4 range ($M = 2.40 \pm 0.17; t(38) = 2.35, p < .05$). All participants rated their relative position on a seven point scale, with 1 = very weak and 7 = very strong. The difference in means between teammate losers and teammate winners was -0.08 ± 0.64 ($t(24) = -0.12, ns$), while the mean position difference between competitor losers and competitor winners was -1.29 ± 0.34 ($t(37) = 3.74, p < .01$). The interaction contrast, or difference between the differences in means, for the two roles was 1.24 ± 0.64 , which is marginally statistically reliable ($t(30) = 1.93, p < .07$), most likely due to the small sample size in this study.

There was no significant difference in the scores obtained by winners and losers in the manipulation task in the teammate or competitor roles. The difference between the average losing and average winning scores was -2.0 ± 0.61 for teammates, and -2.0 ± 0.49 for competitors. Thus, the relative performance by losers and winners in both the teammate and competitor roles was comparable, but losing translated into a much greater decline in self-rating of position strength for competitor losers than teammate losers. The amount by which competitors won or lost in the manipulation task did not matter as much as winning or losing *per se*. Correlating the difference between the score of the winner minus the score of the loser on the status manipulation task with the status difference between the winner and the loser for each dyad yielded a result that was not significantly different from 0 (Pearson's $r = -0.22$).

In addition, a binary logistic regression was conducted only for the competitor role. The difference score ($B = 0.31 \pm 0.24$, *ns*) for the competitor dyads was not a statistically reliable predictor of whether or not the winners in those dyads chose themselves as leader. Thus having won, all winners are equally likely to choose themselves, even if it translates into not coordinating on the highest mutual payoffs.

A word completion task was used to measure the accessibility of equal status concepts. Half (50%) of the teammates completed at least one of the words with the equal status alternative, while only 15% of the competitors did so, $X^2(1, N = 66) = 9.42$, $p < .01$. Since the manipulation task included neutral words, the ability to pull up concepts of equality (i.e., *equality* and *partnership*) are based on the situational and psychological experience of the participants.

In Study 1, teammates were more likely to view themselves as having an equal status compared to competitors. Competitor losers were more likely to see themselves as occupying a position of lower status and, in keeping with the minimal status effect, chose winners to be leader even when it did not result in the highest economic payoffs. Winners, on the other hand, also chose themselves independent of the amount of their win or whether their choice allowed them to achieve the highest economic payoff, again an impact of the minimal status effect.

B. Study 2: Luck based manipulation and winner-take-all compensation

Sixty-four Columbia University students or thirty-two dyads (31 females and 33 males) participated in this study for compensation ranging from \$5.00 to \$9.00. All participants completed all the various questionnaires and followed instructions to not communicate with their dyadic counterparts. All participants were included in the final data set. Thirty participants (15 dyads) were assigned to the teammate role and thirty-four participants (17 dyads) were assigned to the competitor role.

Participants were asked to rate how they felt about their counterpart in the task on a scale of 1 to 6 (1 = definitely competitor; 6 = definitely teammate). Participants conditioned to be a teammate ($M= 4.67 \pm 0.21$), compared with those assigned to the competitor role ($M=3.85 \pm 0.20$), thought about their counterparts more as teammates ($t(62)=2.78, p<.01$). Thus using a luck-based card game without the presence of a bonus or penalty for competitors was sufficient to manipulate role.

Table 2: Coordination in Study 2, by Role

Number (%) of Dyads	Coordinate		Do Not Coordinate	
	Food (Mutually Highest Payoff)	Travel	Choose Self	Choose Other
Teammates	14 (93%) (5 Winner)	1 (7%) (1 Winner)	0	0
Competitors	11 (64.7%) (10 Winner)	1 (5.9%) (1 Winner)	4 (23.5%)	1 (5.9%)

As expected, all 15 of the teammate dyads coordinated and all but one achieved the highest payoff. In contrast, only 12 out of the 17 competitive dyads coordinated, which is a statistically reliable difference ($X^2 (1, N = 32) = 5.23, p < .05$). Competitor dyads continued to coordinate around the winner with 92% of them doing so compared with only 40% of teammate dyads ($X^2 (1, N = 27) = 7.63, p < .01$). Once again, as seen in Study 1 with a skill-based manipulation task, teammates focused on achieving the highest payoff while competitors focused on the winner from the status manipulation task despite the fact that the initial win had been just a matter of luck and had nothing to do with the mutually-beneficial strategy.

In this study, losers in the competitive role reported thinking that competitive winners would chose themselves ($M = 3.00 \pm 0.17$), while winners ($M = 2.53 \pm 0.15$) did not have a strong opinion about loser choices ($t(32) = -2.06, p < .05$). In this study, as in the first one, competitor losers feel that their position is significantly weaker than that of competitor winners. In addition, the status difference (difference between the losers' average self report and winners' average self report) for competitors was 1.24 ± 0.44 , which is a statistically reliable difference ($t(32) = -2.83, p < .01$). In contrast, the mean difference between losers' and winners' self-reported strength position for teammates was -0.27 ± 0.45 , which is not a statistically reliable difference ($t(28) = -0.59, ns$). Note that the status position pattern replicates despite the use of a luck-based manipulation task and the elimination of the bonus and penalty for winners and losers in the competitive role. In the equal partner word completion, 53% of the teammates completed at least one of the implicit measure words with an equal-status word (i.e., *equality* and *partnership*) whereas only 29% of competitors did so ($X^2(1, N = 64) = 12.98, p \leq .01$).

In sum, psychologically speaking, winners and losers in Study 2 behave in much the same way as in Study 1, which is strong evidence for the Minimal Status Effect in the absence of power, potential skill-based linkages, or additional “anointing” by the experimenter. It appears that losers do not feel that they are at a lower status because the winner is more capable at a skill-based task since the minimal manipulation using a luck-based task obtained similar results. In addition, competitors do not appear to be focusing more on their relative status because the experimenter draws additional attention to the win or loss by assigning a bonus or penalty, respectively, because the same pattern of results is found when there was simply the standard rule of winner-take-all.

C. Study 3: Mixing up status effects

If status is indeed a relational construct and is “tied” to the relationship, then changing the members of a dyad while keeping the status difference constant should eliminate the use of status as a focal point when it is not in the interest of both to do so. If the status difference were no longer relevant once the dyadic partners were re-paired, then the mutually higher payoff would be a better focal point for coordination as it would result in each member of the dyad being better off financially.

The general procedure followed was identical to that of previous studies with three changes: upon completion of the card based manipulation task, dyads were re-paired for the coordination task, such that the winner of one dyad was paired with a loser from another dyad and vice versa. Thus both winners and losers would psychologically experience their status positions, and would continue to hold their status position for the second task, but they would not be interacting with the same individual. Winners would interact with a loser, but not the one with whom they had won, and losers would interact with a winner, but not the one to whom they had lost. As in previous studies, participants were informed of all details, including the outcome of the card game, prior to commencing the coordination task. The second change was that all dyads were assigned to be competitors in this study. Since the study was about the relational stability of status, and status was not found to be relevant in the teammate condition in prior studies, the teammate condition was omitted from this study. The third change was that the word completion status measure was not included since there were no teammates in these studies.

Seventy-six undergraduates or thirty-eight dyads participated in this study for compensation ranging from \$5.00 to \$9.00. All participants were included in the final data set as all the various questionnaires were completed and instructions to not communicate with their dyadic counterparts were followed.

We find evidence that when dyads are re-paired, the initial status differential does not transfer to the new relationship. Winners ($M= 4.47 \pm 1.22$) and losers ($M= 4.21 \pm 1.42$) did not show a difference in perceived position ($t(74) = 0.87$, ns). Status did not serve as a focal point for coordination. Although 25 of the 38 dyads (66%) coordinated, 88% of them did so on the Pareto Optimal outcome and only 12% of them did so on the winner of the card game. This is further evidence that relationship dependent status did not serve as the focal point for coordination, but, as expected and is rational, the mutually higher payoff option did.

VI. Discussion and Future Work

The studies presented above illustrate that a minimal manipulation of status is sufficient to greatly impact choices in decisions where multiple motives are at play. Teammates experience the status relationship as that of peers or equality, and as a result they do not pay as close attention to who won or lost the manipulation task. Competitors on the other hand, experience the relationship as a hierarchical one and thus focus on the inequality, i.e., who won or lost the prior task.

These studies also show that the minimal status effect is driven by losers who feel that they are at a lower status. In fact, they are willing to pick the winners as leaders even when it leads to sub-par outcomes. It is also a function of winners who are willing to make *less* money to maintain their status by choosing themselves as leader even when higher payoffs are available. Both winner and loser are in a relational hierarchy and continue to perpetuate it even when it is not to their advantage.

More specifically, in Expectation Theory terms (Berger, Rosenholtz, Zelditch, 1980; Ridgeway & Berger, 1986), losers are willing to lower the expectations they have of themselves and be followers instead of leaders in the coordination task. It is almost as if the previous win becomes a status characteristic (Berger, Fisek, Norman, & Zelditch, 1977) on which future expectations can be based. Theoretically speaking, achieved status should be based on expertise in a relevant task. Thus the willingness of losers to accept a lower position is quite surprising, especially when the task is irrelevant (Study 1) or luck-based (Study 2) and thus an inaccurate measure of expertise.

Essentially, losers are readily willing to accept their lower status even when it is not fully rational to do so. Ellemers, Wilke & van Kippenberg (1993) show that if individuals in a position of lower status believe their position to be legitimate, they are willing to accept it— much like the losers in our studies who, having accepted their lower status, behave in ways that sustain the difference. The most likely reason why winners and losers both choose the winner to be the project leader, even when it results in lower payoffs, is due to the minimal status effect: having accepted their lower status as being legitimate, losers are willing to act in ways that maintains and perpetuates the difference.

What is interesting is that similar results are obtained even in Study 2, where the win is entirely luck-based. Here luck in a card task is essentially acting as the status characteristic, and yet once even something so ephemeral and subtle as luck at cards establishes status, that the established status is experienced and impacts choices in a subsequent interaction. In effect, its impact is identical to what it would have been had the status been based on something more substantial or meaningful.

The minimal status effect appears to impact choices made not only by competitive losers as described above, but also by competitive winners. In our studies, when competitive winners assigned to the Travel channel choose themselves, they do so with the full knowledge that coordinating around them will not result in the highest outcomes. It could be argued that these winners are essentially willing to give up higher outcomes for the sake of maintaining their status.

The essential conditions for a minimal status effect to occur are that the construct of status be psychologically accessible and applicable. Thus teammates do not exhibit the inequality but behave much like equal status partners, while competitors exhibit unequal status with the loser psychologically experiencing a significantly lower status. Once established, the status difference becomes entrenched with substantial impact on subsequent decisions. Given that very minimal manipulations are sufficient to create status differences, the construct of status needs to be incorporated in decision-making models, while the psychological experience of status needs to be researched further.

In addition, the willingness of competitor losers to accept winners as their superior and for winners to continue to choose themselves even when inferior may be highlighting the importance of the need to maintain status (and the status differential), and this need may be more important than the need to make more money. People are motivated to justify their existing social structures and hierarchies (See Jost, Banaji & Nosek, 2004 for a review of System Justification Theory). The competitive losers in our studies perceive themselves to be at a lower status and are similarly willing to accept negative and unfair outcomes. Having accepted (perhaps implicitly) that they are legitimately in a position of lower status, they allow the winners to act in ways that may not be fair or justified.

Clearly status is an important factor in numerous decisions, such as environmental decisions, where individuals who come together for making a decision (who can represent countries, companies, or simply groups of stakeholders) vary in their status, as well as in how they perceive the situation (as a competitive or collegial one). As interested as these individuals might be in making the best decision vis-à-vis the environment, they also have social goals regarding the interaction among them. Status differences can thus play a critical role in evaluation of outcomes and making the final decision.

There remain many unanswered questions in this research. One area of research would be to explore the boundary conditions for the minimal status effect. As mentioned above, teammates and competitors show divergent behavior due in part to the applicability (or lack thereof for teammates) of the status inequality. Thus how the win and loss are perceived will be impacted by other situational variables, which need to be examined in future research. Similarly, the applicability of the minimal status manipulation over time, as well as over individuals, needs to be fully explored.

A second major question pertains to the motivation of the winners and losers in the competitive role. Are they motivated to act as they do because they expect the other to act in a particular way? Could it be that competitive losers assume competitive winners, who are at a higher status, will be more likely to choose themselves, and since coordination yields better outcomes than non-coordination, the losers are better off choosing the winner as well? This does not imply that competitive dyads are behaving rationally since it is *not* rational for the *winners* to choose themselves when there is a higher payoff available from *not* choosing themselves. However, due to the minimal status effect, competitive losers and winners might have changed expectations that transform the payoffs associated with the decision choices.

A third critical issue is to fully understand the impact of the minimal status effect at the group level. How does the relative status of a company, institution or a group of individuals influence their interactions and decisions? Clearly this research merely scratches the surface of what appears to be a powerful psychological phenomenon that is capable of being easily manipulated and has substantial

behavioral impact. Many aspects of the phenomenon need further research if nature and significance is to be fully understood.

Appendix

The status questions were normed in a pilot with 42 participants or 21 dyads (20 participants or 10 dyads in the teammate role and 22 participants or 11 dyads in the competitor role). Pilot participants were asked to:

- Rate their perceived status on a 7-point scale (1 = definitely lower than counterpart, 4 = equal and 7 = definitely higher than counterpart).
- Rate their perceived position of strength on a 7-point scale (1 = very weak and 7 = very strong).

18 of the 20 participants (90%) in the teammate role responded with a rating of 4 in the status question, i.e., they felt they were equal to their counterpart in status. The remaining two (both in the same dyad) rated themselves as being at a higher status than their counterpart. Competitors were different from teammates in their self-reports. Firstly, none (0%) of the competitors responded with a rating of 4 (equal) in the status question. Losers felt that their status was lower ($M= 2.27 \pm 0.20$) compared with winners ($M= 5.64 \pm 0.20$). This was a statistically reliable difference: $t(20) = 11.94, p < .01$. In addition, losers ($M= 2.64 \pm 0.20$) felt that they were in a position of weakness compared with winners ($M= 5.64 \pm 0.15$; $t(20) = 11.82, p < .01$). The two self-reports of perceived position and perceived status were highly correlated for competitors: Pearson's $r = 0.92, p < .01$. These findings allowed the use of the position of strength question to function as a surrogate for the status question in our studies while avoiding a direct question about status that could inadvertently prime directly the concept of status. Participants in the pilot were not allowed to participate in any of the studies in this paper.

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