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The Too-Much-Talent Effect: Team Interdependence Determines When More Talent Is Too Much or Not Enough

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Abstract
Five studies examined the relationship between talent and team performance. Two survey studies found that people believe there is a linear and nearly monotonic relationship between talent and performance: Participants expected that more talent improves performance and that this relationship never turns negative. However, building off research on status conflicts, we predicted that talent facilitates performance—but only up to a point, after which the benefits of more talent decrease and eventually become detrimental as intrateam coordination suffers. We also predicted that the level of task interdependence is a key determinant of when more talent is detrimental rather than beneficial. Three archival studies revealed that the too-much-talent effect emerged when team members were interdependent (football and basketball) but not independent (baseball). Our basketball analysis also established the mediating role of team coordination. When teams need to come together, more talent can tear them apart.

Keywords
cooperation, social interaction, open materials

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I have players playing in Ligue 1, others in big clubs playing in the Champions League. The more I have, the better it is.

—French national-team coach Didier Deschamps, denying that the crux of his team's poor performance during the World Cup qualification stage was a lack of talent (FIFA, 2013)

Didier Deschamps's quote reflects a widely held belief that top-talented individuals are the key to performance of teams, organizations, and even entire societies. This faith in the power of higher and higher levels of talent to produce ever-better performance drives groups to fiercely compete to attract the most talented individuals. Surveys across industries and countries find that organizations identify talent attraction as their top priority (Chambers, Foulon, Handfield-Jones, Hanklin, & Michaels, 1998; Ready & Conger, 2007). These practices are presumably based on the belief that more talent is better, and that the relationship between talent and team performance is linear and monotonic. The current research tested the validity of this widely held intuition. Does bringing together the most talented individuals always produce the best performance?

We propose that these widespread intuitions about talent and team performance are not uniformly accurate. Specifically, we argue that more talent often facilitates team performance—but only up to a point. Beyond this point, the marginal benefits of more talent will decrease and eventually turn into detriments. That is, at some point there will be too much talent, which will impair

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team performance. In the current article, we present evidence for this too-much-talent effect, establish when more talent will be detrimental rather than beneficial, and demonstrate why this effect occurs.

The Too-Much-Talent Effect

In formulating our too-much-talent hypothesis, we drew from the hierarchy literature, which predicts that teams with too many dominant individuals produce disputes over within-group authority and status that ultimately undermine performance (Bendersky & Hays, 2012). We define teamwork as "people working together to achieve something beyond the capabilities of individuals working alone" (Marks, Mathieu, & Zaccaro, 2001, p. 356). Status competition within teams can lead individuals to focus their attention on jostling for intragroup rank rather than on directing their efforts toward coordination and team performance (De Dreu & Weingart, 2003). Indeed, status competition can lead individuals to actively undermine fellow team members' efforts so as to advance their own standing within the group hierarchy (Greer, Caruso, & Jehn, 2011; Overbeck, Correll, & Park, 2005; Porath, Overbeck, & Pearson, 2008). For example, Groysberg, Polzer, and Elfenbein (2011) found that having a high proportion of high-status members can negatively affect the performance of financial research teams. Likewise, Ronay, Greenaway, Anicich, and Galinsky (2012) demonstrated that teams composed exclusively of high-testosterone individuals experienced reduced performance because group members fought for dominance. Similar findings have been observed in the domain of poultry science: Having too many dominant, high-egg-producing chickens in a single colony reduces overall egg production as a result of intense conflicts (Muir, 1996). In the absence of a clearly defined pecking order, energy that would normally be steered toward intrateam coordination and performance is diverted toward jockeying for dominance.

Although status, dominance, testosterone, and chickens' egg-laying capacity may correlate with talent (i.e., one's ability to consistently perform a task at very high levels), past research does not directly address the question of whether more talent might ironically decrease team performance. The goal of the current research was therefore to answer whether, when, and why high levels of talent may reduce team performance.

Task Interdependence and Coordination

We propose that the too-much-talent effect emerges because status conflicts can impair team coordination, "the process of managing dependencies among activities" (Malone & Crowston, 1994, p. 87). One factor that influences whether coordination is necessary for teams to perform well is the degree of task interdependence, defined as "the extent to which team members cooperate and work interactively to complete tasks" (Stewart & Barrick, 2000, p. 137). When task interdependence is high, team members must coordinate their behavior to successfully complete their task while competing with other teams (Wageman, 2001). However, when task interdependence is low, each individual's talent contributes additively to the team's outcome (Frank, 1985), and thus less coordination among team members is required.

Given that prior research has not explored whether task interdependence moderates the relationship between talent and team performance, an additional goal of the current research was to examine whether the too-much-talent-effect emerges only in interdependent tasks, and not in independent tasks. We predicted that this effect would occur only in contexts in which task interdependence is pronounced. Conversely, for independent tasks, we predicted that the relationship between talent and team performance would never turn negative and that more talent would consistently lead to better performance.

Overview of the Current Studies

We tested whether, when, and why the relationship between talent and team performance turns negative. We conducted five studies, using a combination of survey and archival methods. Studies 1a and 1b involved surveys that gauged lay perceptions of the relationship between talent and team performance. In Study 2, we examined real-world data from national football (soccer) teams to test the actual impact of talent on team performance during the qualification for the 2010 World Cup in South Africa and the 2014 World Cup in Brazil. The football data allowed us to establish that more talent has decreasing marginal benefits, and that there is a point at which more talent becomes too much talent. To test our proposal that impaired intrateam coordination underlies the too-much-talent effect, in Study 3 we replicated Study 2 in the context of the National Basketball Association (NBA) and explored whether decreasing levels of intrateam coordination mediated the relationship between high levels of talent and reduced on-court performance. To test whether the impact of talent on team performance would not turn negative in relatively independent tasks, in Study 4 we examined the role of talent in Major League Baseball (MLB). Prior research suggests that baseball depends far less on coordination and task interdependence than basketball does (Bloom, 1999; Halevy, Chou, Galinsky, & Murnighan, 2012). Therefore, we predicted that the relationship between talent and baseball teams' performance would not turn negative.

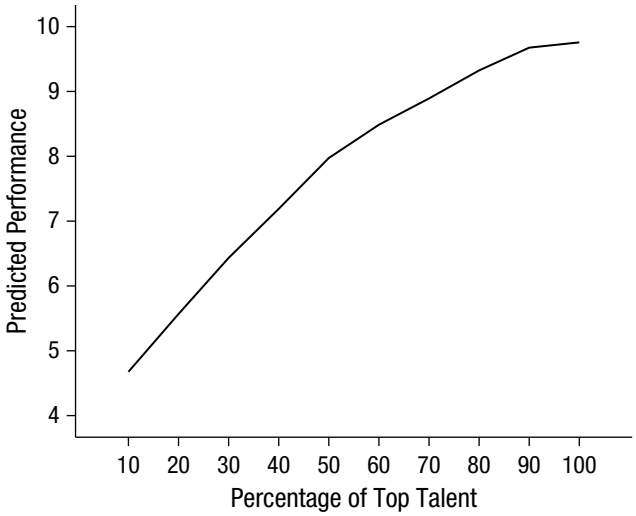

Fig. 1. Results from Study 1a: predicted performance of a firm as a function of its percentage of top-talent employees.

Study 1: Lay Beliefs About the Relationship Between Top Talent and Performance

Study 1a

Method. In our first study, we examined whether people believe that the relationship between top talent and team performance is linear and monotonic. Thirty-seven participants (21 men; mean age = 33.92 years, *SD* = 11.75) predicted the success of a firm on the basis of the firm's percentage of top-talented employees. We determined our sample size in advance. Participants were asked to indicate how well they expected the firm to perform (1 = *very poor performance*, 10 = *very good performance*) if it had a 10% level of top-talent concentration, a 20% level, and so on up to 100%.

Results. Expectations of the firm's performance increased monotonically as a function of the percentage of top-talent employees. Expected performance was highest (M = 9.76, SD = 0.80) between 90% and 100% top talent. Note that participants did not believe that the effect of talent would ever turn negative (see Fig. 1).

Study 1b

Method. In our next study, 37 participants (25 men; mean age = 32.49 years, *SD* = 10.16) assumed the role of a national football (soccer) team manager and selected the combination of players that would maximize their team's chances of winning an international competition. We determined our sample size in advance. (Two participants failed an attention check and were omitted from the analyses. Including them did not affect the significance of the results.) Participants selected 11 players for four different positions: 3 forwards, 3 midfielders, 4 defenders, and 1 goalkeeper. Participants had an equal number of top-talent and non-top-talent players to choose from for each position. Profiles of top-talent players were marked with two gold stars. Participants were asked, "How well do you expect your team to perform in the tournament?" and provided ratings on a 7-point scale (1 = *not well at all*, 7 = *very well*).

Results. On average, 9.74 (SD = 1.85) top-talent players were selected for the 11 positions (88.55%). The percentage of top-talent selections was similar for forwards (90.48%), midfielders (86.67%), and defenders (86.43%), but higher for the goalkeeper (97.14%), an effect likely due to the restricted number of options available for this position. The more top-talent players participants selected, the better they expected their team to perform in the tournament (b = 0.20, SE = 0.07, $p < .01$).

Discussion

Studies 1a and 1b demonstrate that people believe that more top talent increases team performance and reveal this belief in their selection decisions. Moreover, participants expected that the effect of talent would never turn negative.

Study 2: Effects of Talent in International Football Contests

Study 2 investigated whether more top talent could become too much talent and undermine actual team performance. Despite people's beliefs in a linear and monotonic relationship between talent and performance, we predicted that more talent would produce marginally diminishing returns that would eventually turn negative. To test this hypothesis, we analyzed archival data from the Fédération Internationale de Football Association (FIFA). This approach allowed us to objectively measure both the teams' talent and their relative performance.

Method

Top talent. Sample size was determined in advance because we measured top talent for all national teams that received a FIFA ranking. Top talent was indexed by the percentage of players within each national team who had contracts with one of the world's elite club teams. To assess elite status, we used the Deloitte Football Money League ranking of clubs by revenue generated from football activity (Sports Business Group at Deloitte, 2008,

Table 1. Descriptive Statistics and Correlations in Study 2

			Correlations		
Measure	*M*	*SD*	1	2	3
1. Team performance (points)	393.30	320.12			
2. Top-talent percentage	7%	16%	.73***		
3. Roster size	18.53	6.79	.53***	.24***	
4. Games played	8.90	4.65	.54***	.29***	.81***

***$p < .001$.

2009, 2010, 2012, 2013, 2014). We computed a top-talent percentage for each national team's roster during the 2010 and 2014 World Cup qualification phases by dividing the team's number of players active in one of these elite clubs (based on the 2008–2010 and 2012–2014 Deloitte club rankings, respectively) by the total number of players selected for the team. We included only those players who were selected twice or more during the qualification phase. Analyses produced similarly significant results with different cutoff points (e.g., all selected players, including those selected only once); we chose to include players who were selected twice or more to get a more reliable measure of the teams' regular compositions. Higher values of the top-talent percentage indicate a greater ratio of top talent.

To establish that playing for a club team with an elite Deloitte ranking was a valid proxy for top talent, we cross-referenced the players we had identified as top talent in 2010 with all players selected for the FIFA 2010 All-Star team, "the 2010 World Cup most talented players" (FIFA, 2010). All players selected for the All-Star team were coded as top talent in our sample.[1] Robustness tests with different cutoffs for top talent replicated the results reported here (see Robustness Tests in the Supplemental Material available online).

Team performance. Our team performance data were based on the averaged FIFA rankings during the 2010 and 2014 World Cup qualification periods (i.e., September 2008, March 2009, September 2009, and March 2010 for the 2010 World Cup and September 2012, March 2013, September 2013, and March 2014 for the 2014 World Cup; FIFA, n.d.-a). We chose these periods because the new FIFA rankings system (FIFA, n.d.-b) was used in both. This system calculates the performance of a given country's team in all international matches on the basis of the games' results, importance of each match, strength of opponents, regional strength, period, and number of matches considered per year (see FIFA, n.d.-b, for the calculation procedure). More points indicate better performance.

The 2010 World Cup qualification period included 207 national teams. Papua New Guinea was disqualified from participating and was coded as missing. The 2014 World Cup qualification period included 209 national teams because 3 new national teams received FIFA affiliation (Curaçao, São Tomé and Príncipe, and South Sudan), whereas the Netherlands Antilles national team was dissolved in October 2010.

Control variables. To ensure that our findings were robust to other factors that could influence team performance, we controlled for roster size, measured as the total number of players who were selected twice or more, and the number of games played during the qualification phase.

Results

We used generalized estimating equations with country as the subject variable and qualification period as the time variable in a mixed regression method (Tweedie with a log link) to analyze the data because our dependent variable was based on count data that were averaged (Little & Rubin, 1987). Table 1 presents descriptive statistics and Pearson's *r*s for all variables. Table 2 presents the results of the regression analyses.

Results were consistent with the lay intuition documented in Studies 1a and 1b, in that the linear relationship between talent and team performance was positive and significant (Table 2, Model 1). However, Study 2 also revealed a significant quadratic effect of top talent: Top talent benefited performance only up to a point, after which the marginal benefit of talent decreased and turned negative (Table 2, Model 2; Fig. 2). The linear and curvilinear effects remained significant when control variables were omitted ($b = 5.95$, $SE = 0.42$, $p < .001$, and $b = -4.98$, $SE = 0.57$, $p < .001$, respectively).

We also examined the impact of outliers using Cook's distance. The Cook's distance value measures how far an observation is from the others in terms of the levels of the independent variable. Observations with values larger than $4/n$ (with n being the sample size) are considered to be potentially highly influential outliers. The linear and curvilinear effects of talent remained significant after we removed 11 outliers ($b = 5.61$, $SE = 0.43$, $p < .001$, and $b = -5.26$, $SE = 0.65$, $p < .001$).

Table 2. The Impact of Talent on Football Teams' Performance in Study 2 (n = 415)

Predictor	Model 1	Model 2
Talent	1.84*** (0.16)	4.58*** (0.11)
Talent-squared	—	−4.26*** (0.49)
Roster size	0.04*** (0.01)	0.04*** (0.01)
Games played	0.03*** (0.01)	0.02** (0.01)
Intercept	4.63*** (0.11)	4.58*** (0.11)

Note: Standard errors are reported in parentheses. The corrected quasi-likelihood under the independence model criterion was 3,400.13 for Model 1 and 2,979.62 for Model 2.
**p < .01. ***p < .001.

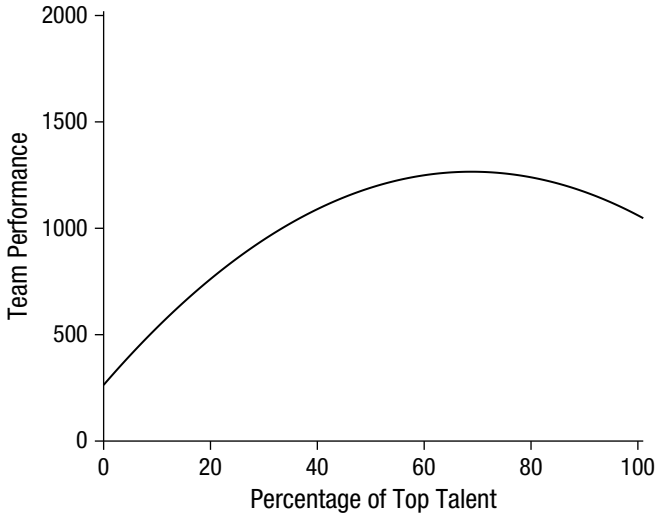

Fig. 2. Results from Study 2: team performance during the 2010 and 2014 FIFA (Fédération Internationale de Football Association) World Cup qualification periods as a function of the percentage of top talent on the team's roster.

Study 3: Talent, Coordination, and Performance in the NBA

To test the robustness of the too-much-talent effect, in Study 3 we examined the impact of top talent on NBA basketball teams' performance during 10 seasons. The availability of comprehensive on-court data in the NBA also enabled us to test our proposed mechanism for the too-much-talent effect: mediation by intrateam coordination.

Method

Top talent. We determined our sample size in advance by using NBA teams' performance in the 10 most recent seasons (2002–2012) for which data were available. We could not use the same talent measure as in Study 2 because the NBA analyses focused on teams that played in the same league rather than national teams. Instead, we coded top talent using the estimated wins added (EWA) for all individual players in the 30 NBA teams over those seasons. This resulted in a total of 297 team-level observations (there were only 29 teams in the 2002–2003 and 2003–2004 seasons because the Charlotte Bobcats were founded in 2004 and entered their first competition in 2004–2005). EWA captures a player's overall contribution to his team, as it gives the estimated number of wins a player adds to the team's season total above what a replacement player would produce (Hollinger, 2005).

EWA data were retrieved from ESPN (ESPN, n.d.) for each of the 4,285 player-level observations. For all seasons, we coded whether a player was in the top third (33.3%) of the overall cohort (1) or not (0) because this cutoff is often used to identify, select, and reward talent in organizations (e.g., McClelland, 1998), academia (e.g., Auguste, Kihn, & Miller, 2010; Crane, 1965) and sports (e.g., Groysberg, Sant, & Abrahams, 2008). Our theory suggests that it is the concentration of top talent that matters for coordination and performance. Thus, we did not use a mean EWA measure for each team because it does not accurately reflect the concentration of top talent and because our cutoff measure is conceptually and empirically similar to the measure of top talent that we used in Study 2. To establish that our measure was a valid proxy for top talent, we cross-referenced the players in the top third for EWA with all players selected for the 10 NBA All-Star tournaments, which bring together "the league's most talented players" (NBA, n.d.-b). Ninety-nine percent of the players selected for All-Star games during the 10 seasons were coded as top talent in our sample. Robustness tests with top 40% and top 20% used as the cutoffs for top talent replicated the results reported here (see Robustness Tests in the Supplemental Material).

We then calculated the top-talent percentage at the team level by dividing the number of top-talent players on a given team by the total number of players on that team. To achieve a relatively reliable measure of each team's regular composition, we included only the 3,876 players who played at least 20% of the games in a given season. Lower (e.g., 10%) and higher (e.g., 30%) cutoff points produced results with the same patterns and levels of significance as those reported here. Higher values of the top-talent percentage indicate higher levels of talent.

Mediator: intrateam coordination. We used a three-item measure of on-court performance to quantify intrateam coordination. First, we used the average number of *assists* per game. An assist is credited when a player passes to a teammate who then scores; assists indicate team members' ability and willingness to support each other (Berman, Down, & Hill, 2002). Second,

Table 3. Descriptive Statistics and Correlations in Study 3

Measure	*M*	*SD*	Correlations 1	2	3	4	5	6
1. Team performance (win percentage)	50%	15%						
2. Top-talent percentage	34%	11%	.35***					
3. Intrateam coordination	0.00	0.75	.63***	.37***				
4. Free-throw percentage	76%	3%	.10	.07	.13*			
5. Roster size	13.01	2.37	–.22***	–.34***	–.11	–.10		
6. Games played	80.39	4.82	.00	–.00	.01	.05	–.16**	
7. Lagged performance	50%	15%	.55***	.26***	.43***	.05	–.08	.00

*$p < .05$. **$p < .01$. ***$p < .001$.

we used *field-goal percentage*, the number of field goals made divided by the number of field goals attempted. A high field-goal percentage is most likely to result when a team is well coordinated because coordinated actions lead to less-contested shots. Finally, we used the average number of *defensive rebounds* per game. A defensive rebound occurs when a team retrieves the ball from the opponent after a missed shot and requires coordinated actions (Halevy et al., 2012; Wang, 2009). We standardized and averaged these three measures ($\alpha = .63$).[2]

Team performance. Team performance was measured using each team's end-of-year win percentage and was retrieved from the NBA (NBA, n.d.-a) for each of the 10 seasons. Higher values indicate better performance. We obtained results identical to those reported here when we used number of wins as the dependent measure.

Control variables. As in Study 2, we controlled for roster size and number of games played. To account for the nonindependence of teams across seasons, we also included lagged performance, the win percentage of the preceding season, as a control variable. To be sure that our process measure captured coordination beyond individual performance, we also included individual players' free-throw percentages (Halevy et al., 2012).

Results

We used fixed-effects linear regressions of panel data, with team as the panel variable and season as the time variable (Wooldridge, 2009). Table 3 presents descriptive statistics and Pearson's *r*s for all variables. Tables 4 and 5 present the results of the regression analyses.

As in Study 2, the linear relationship between talent and team performance was positive and significant (Table 4, Model 1), but only up to a point, after which the marginal benefit of talent decreased and the slope eventually turned negative (Table 4, Model 2; Fig. 3). The linear and curvilinear effects remained significant when all control variables were omitted ($b = 1.47$, $SE = 0.44$, $p = .002$, and $b = -1.45$, $SE = 0.61$, $p = .02$, respectively). The linear and curvilinear effects also remained significant after we excluded 22 outliers ($b = 1.57$, $SE = 0.33$, $p < .001$, and $b = -1.94$, $SE = 0.42$, $p < .001$).

Table 4. The Impact of Talent on Basketball Teams' Performance in Study 3 ($n = 297$)

Predictor	Model 1	Model 2	Model 3
Talent	0.35** (0.10)	1.61*** (0.42)	0.91* (0.43)
Talent-squared	—	–1.83** (0.56)	–1.23* (0.57)
Intrateam coordination	—	—	0.10*** (0.01)
Free-throw percentage	0.54 (0.29)	0.56 (0.27)	0.17 (0.25)
Roster size	–0.00 (0.00)	–0.00 (0.00)	–0.01* (0.00)
Games played	–0.00 (0.00)	–0.00 (0.00)	0.00 (0.00)
Lagged performance	0.32*** (0.05)	0.34*** (0.05)	0.22*** (0.05)
Intercept	–0.12 (0.27)	–0.30 (0.26)	0.28 (0.24)
R^2	.34	.38	.51
F	$F(5, 29) = 14.11$***	$F(6, 29) = 14.93$***	$F(7, 29) = 28.84$***

Note: Standard errors are reported in parentheses.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 5. The Impact of Talent on Basketball Teams' Intrateam Coordination in Study 3 (n = 297)

Predictor	Model 1	Model 2
Talent	2.93*** (0.52)	7.13*** (1.46)
Talent-squared	—	–6.07** (1.90)
Free-throw percentage	3.89* (1.52)	3.94* (1.47)
Roster size	0.04 (0.02)	0.03 (0.02)
Games played	0.00 (0.01)	0.00 (0.01)
Lagged performance	1.20*** (0.26)	1.25*** (0.26)
Intercept	–5.32*** (1.14)	–5.91*** (1.13)
R^2	.24	.26
F	$F(5, 29) = 14.14$***	$F(6, 29) = 12.88$***

Note: Standard errors are reported in parentheses.
*$p < .05$. **$p < .01$. ***$p < .001$.

We found similar effects of top talent on intrateam coordination. As predicted, there was a linear relationship between talent and intrateam coordination (Table 5, Model 1), but the significant quadratic term showed that the linear relationship occurred only up to a point, after which the marginal benefit of talent decreased (Table 5, Model 2; Fig. 4). The linear and curvilinear effects remained significant when all control variables were omitted ($b = 6.74$, $SE = 1.70$, $p < .001$, and $b = -5.41$, $SE = 2.30$, $p = .025$, respectively), and also after we excluded 14 outliers ($b = 7.89$, $SE = 1.51$, $p < .001$, and $b = -7.70$, $SE = 1.88$, $p < .001$).

We tested whether intrateam coordination mediated the effects of talent on performance. The curvilinear effect of talent on performance was much weaker when intrateam coordination was included in the model (Table 4, Model 3), a result consistent with mediation. A Sobel test revealed significant mediation by intrateam coordination (Sobel's $Z = 2.93$, $p < .01$; see Fig. 5). We also found evidence of mediation when we excluded 22 outliers (Sobel's $Z = 2.17$, $p < .05$). Bootstrapping results with 5,000 resamples demonstrated that zero fell outside the 95% confidence interval (CI) for the indirect effect, 95% CI = [–1.20, –0.12]. These analyses demonstrate that teams with levels of top talent that are too high perform worse than teams with lower levels of top talent because they coordinate less effectively.

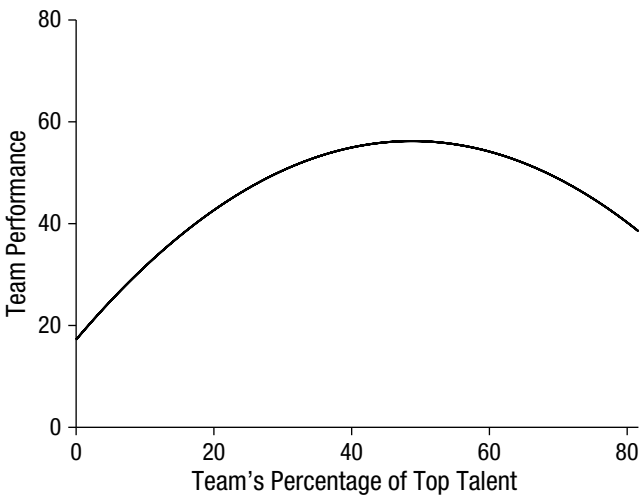

Fig. 3. Results from Study 3: team performance in the National Basketball Association from 2002 through 2012 as a function of the percentage of top talent on the team's roster.

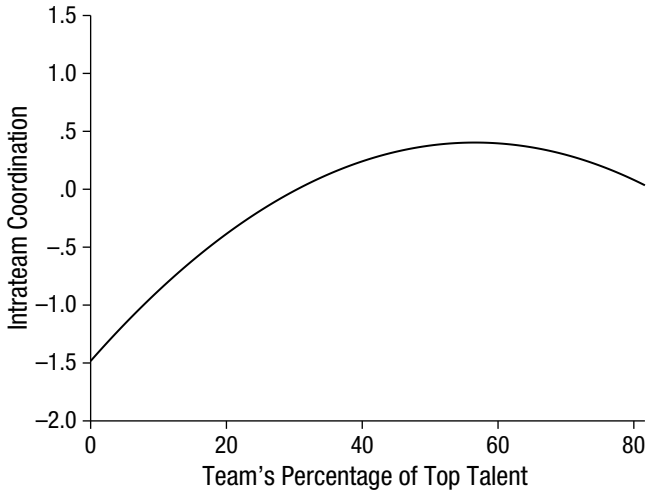

Fig. 4. Results from Study 3: intrateam coordination in the National Basketball Association from 2002 through 2012 as a function of the percentage of top talent on the team's roster.

Study 4: Talent and Performance When Interdependence Is Low: The Case of MLB

Studies 2 and 3 demonstrated that the marginal benefit of more top talent decreased at a much faster rate than people in Study 1 expected. In addition, Studies 2 and 3 showed that the relationship between talent and performance eventually turned negative. However, we also predicted that the too-much-talent effect emerges only when there is a high level of task interdependence among team members. When task interdependence is low and there is less coordination required, more talent should continue to benefit teams and not hurt performance.

To test this hypothesis, we analyzed MLB data. Prior research suggests that baseball involves much less task interdependence among team members (Bloom, 1999; Halevy et al., 2012), compared with football and basketball. In fact, baseball has been described as "an individual sport masquerading as a team sport" (Simmons, 2012). Therefore, we predicted that the relationship between talent and team performance in baseball would never turn negative.

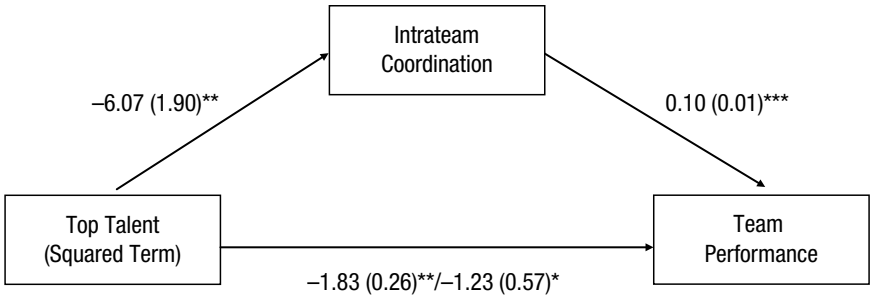

Fig. 5. Results from Study 3: intrateam coordination as a mediator of the curvilinear effect of talent on basketball teams' performance. The values along the paths are unstandardized regression coefficients; standard errors are reported in parentheses. Asterisks indicate the coefficients' level of significance (*$p < .05$, **$p < .01$, ***$p < .001$). Along the bottom arrow, the results on the left reflect the direct effect of top talent on team performance, and the results on the right reflect the effect of top talent on team performance with intrateam coordination included.

Method

Top talent. We determined our sample size in advance by including all individual players on 30 MLB teams over the 10 most recent seasons (2002–2012) for which data were available; this resulted in a total of 300 team-level observations. We identified top talent using wins above replacement (WAR), the number of wins a player contributes relative to a freely available minor-league player. Similar to the top-talent measure in Study 3, WAR captures a player's overall contribution to the team and is an ideal measure of talent because it gives the estimated number of wins a player adds to a team's season total above what a replacement player would produce.

WAR data were retrieved from Baseball Reference (Baseball-Reference.com, n.d.) for each of the 13,750 player-level observations. For all seasons, we coded whether a player was in the top third (33.3%) of the overall cohort (1) or not (0). To establish that our measure was a valid proxy for top talent, we cross-referenced the players in the top third for WAR with all players selected for each of the annual MLB All-Star tournaments, which bring together the league's most talented players selected by managers and fans. Eighty percent of the players who participated in All-Star games during the 10 seasons were coded as top talent. Robustness tests with top 40% and top 20% used as the cutoffs for top talent replicated the results reported here (see Robustness Tests in the Supplemental Material). We then calculated the top-talent percentage in the same way as in Studies 2 and 3. In these calculations, we included only the 7,069 players who played 20% or more of the games in a given season. Lower (e.g., 10%) and higher (e.g., 30%) cutoff points produced results identical to those reported here. Higher values of the top-talent percentage indicate higher levels of talent.

Team performance. Team performance was measured using each team's win percentage and was retrieved from Baseball Reference (Baseball-Reference.com, n.d.) for each of the 10 seasons. Higher values indicate better performance. We obtained results identical to those reported here when we used number of wins as the dependent measure.

Control variables. As in Study 3, we included roster size, number of games played, and lagged performance as control variables.

Results

The same analytical approach was used as in Study 3. Table 6 presents descriptive statistics and Pearson's *r*s for our independent, control, and dependent variables. Table 7 presents the results of the regression analyses.

As predicted, we found a significant linear relationship between top talent and team performance (Table 7, Models 1 and 2) but no curvilinear effect (Fig. 6). When all control variables were omitted, the linear effect was significant ($b = 0.76$, $SE = 0.17$, $p < .001$). Although the curvilinear relationship was significant when control variables were omitted ($b = -0.49$, $SE = 0.24$, $p = .05$), the effect of talent on team performance never turned negative. The linear effect remained significant after we excluded 17 outliers ($b = 0.62$, $SE = 0.13$, $p < .001$), whereas the curvilinear effect was not significant, $b = -0.30$, $SE = 0.18$, $p > .10$).

As we predicted, the effect of top talent never turned negative in baseball, a sport in which task interdependence is relatively low (Bloom, 1999; Halevy et al., 2012). Thus, there was no too-much-talent effect in baseball, unlike in football and basketball.

Table 6. Descriptive Statistics and Correlations in Study 4

Measure	*M*	*SD*	Correlations 1	2	3	4
1. Team performance (win percentage)	50%	7%				
2. Top-talent percentage	34%	11%	.72***			
3. Roster size	23.56	2.54	–.22***	–.37***		
4. Games played	161.95	0.31	.10	.14*	–.06	
5. Lagged performance	50%	7%	.53***	.34***	–.17**	.05

*$p < .05$. **$p < .01$. ***$p < .001$.

General Discussion

Intuitively, people believe that teams will benefit from ever-increasing levels of top talent. Indeed, Studies 1a and 1b confirmed that people generally believe that the relationship between talent and performance is linear and monotonic; participants expected that more talent would improve performance, and they did not expect the relationship between talent and team performance to turn negative at any level of talent.

In contrast to these lay intuitions, Studies 2 and 3 demonstrated that the relationship between talent and performance eventually turns negative in both football and basketball. First, the actual marginal benefit of more talent decreased at a much faster rate than people believed it would. Second, in both cases, the relationship between talent and performance eventually turned negative.

We predicted that this too-much-talent effect would emerge only when successful outcomes were contingent on a high level of task interdependence among teammates. We found two pieces of evidence supporting this prediction. First, reduced levels of intrateam coordination mediated the too-much-talent effect in basketball. Second, the too-much-talent effect held only when task interdependence was high. When interdependence was relatively low (i.e., in baseball), the relationship between top talent and team performance never turned negative. These results suggest that people's lay beliefs about the relationship between talent and performance are accurate, but only for tasks low in task interdependence.

The current studies contribute to the literature by identifying both when and why more talent becomes too much talent. Although we inferred effects of task interdependence by comparing results for football and basketball with those for baseball, future research could manipulate task interdependence directly and test the effects of other types of interdependence (e.g., outcome interdependence). Future research could also more directly explore whether status conflicts underlie the too-much-talent effect, as well as investigate whether our findings extend beyond the domain of sports. Given prior research showing that talent affects perceptions of status (Gould, 2002) and that status perceptions can hurt performance (Bendersky & Hays, 2012), we predict that the too-much-talent effect will be found in other organizational contexts as well (see Groysberg et al., 2008). Indeed, "what connects the domains of sport

Table 7. The Impact of Talent on Baseball Teams' Performance in Study 4 (n = 300)

Predictor	Model 1	Model 2
Talent	0.41*** (0.03)	0.70*** (0.15)
Talent-squared	—	–0.42 (0.21)
Roster size	0.00 (0.00)	0.00 (0.00)
Games played	0.00 (0.01)	0.00 (0.01)
Lagged performance	0.21*** (0.05)	0.20*** (0.04)
Intercept	–0.33 (1.68)	–0.38 (1.71)
R^2	.60	.61
F	$F(4, 29) = 78.85$***	$F(5, 29) = 93.36$***

Note: Standard errors are reported in parentheses.
***$p < .001$.

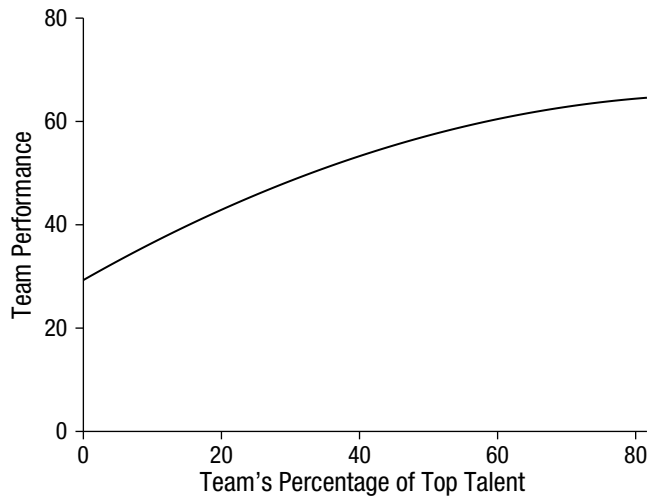

Fig. 6. Results from Study 4: team performance in Major League Baseball from 2002 through 2012 as a function of the percentage of top talent on the team's roster.

with other organizational contexts are central concerns of competition and cooperation" (Day, Gordon, & Fink, 2012, p. 399).

Our findings reflect the disappointing fact that teams of superstars often fail to live up to expectations. Consider the disappointing performances of the French national football team in the 2010 World Cup, the Dutch national football team during the 2012 European championship, or the Miami Heat during the 2010–2011 NBA season. All these teams were brimming with individual talent. The current data suggest that selecting fewer top-talent players may produce a better team. Indeed, Louis van Gaal made a bold move when he took over as coach of the Dutch national team following the 2012 European championship: He completely reassembled the team and significantly reduced the number of the team's top-talented players (i.e., the number who had contracts with the world's elite clubs). His actions suggested that he understood the too-much-talent effect that we have documented here. The Dutch qualified for the 2014 World Cup without losing a single game. Likewise, the Miami Heat won the championship in 2011–2012 when two of their All-Stars were hobbled by injuries, which lowered their overall talent but created a clear pecking order.

Given the ubiquity of and reliance on interdependent teams in society, organizational architects should be wary that too much top talent can produce diminishing marginal returns and even decrease performance by hindering intrateam coordination. Just as a colony of high-performing chickens competing for dominance suffers decrements in overall egg production and increases in bird mortality, teams with too much talent appear to divert attention away from coordination as team members peck at each other in their attempts to establish intragroup standing. In many cases, too much talent can be the seed of failure.

Author Contributions

R. I. Swaab and A. D. Galinsky developed the study concept. All authors contributed to the data collection, analysis, and interpretation. R. I. Swaab, A. D. Galinsky, and E. M. Anicich drafted the manuscript, and M. Schaerer and R. Ronay provided numerous critical revisions. All authors approved the final version of the manuscript for submission.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

Supplemental Material

Additional supporting information may be found at http://pss.sagepub.com/content/by/supplemental-data

Open Practices

The data for Studies 1a and 1b have been made publicly available via Open Science Framework and can be accessed at https://osf.io/bw48s. The materials for Studies 1a and 1b have also been made publicly available via Open Science Framework and can be accessed at https://osf.io/y4c82. Because the individual-level player data in Studies 2, 3, and 4 are also part of another research project, there is a 3-year embargo on this data posting. It is important to note that all the archival studies are based on publicly available data sets. Thus, motivated investigators who follow the procedures described in the Method sections (all sources for data download are cited) could re-create exactly the same data sets. The complete Open Practices Disclosure for this article can be found at http://pss.sagepub.com/content/by/supplemental-data. This article has received the badge for Open Materials. More information about the Open Practices badges can be found at https://osf.io/tvyxz/wiki/view/ and http://pss.sagepub.com/content/25/1/3.full.

Notes

1. We could not conduct these analyses for the 2014 data because the World Cup in Brazil had not yet finished at the time this article was written.
2. Although reliability coefficients tend to be higher in survey research, this coefficient is considered to be satisfactory given that the three measures included in our coordination index involved objective behavioral measures that were aggregated across multiple individuals, teams, months, and seasons (Halevy et al., 2012).

References

Auguste, B., Kihn, P., & Miller, M. (2010). *Closing the talent gap: Attracting and retaining top-third graduates to careers in teaching* (McKinsey & Company Report). Retrieved from http://mckinseyonsociety.com/closing-the-talent-gap/

Baseball-Reference.com. (2013). *American League team statistics and standings*. Retrieved from http://www.baseball-reference.com/leagues/AL/

Bendersky, C., & Hays, N. A. (2012). Status conflict in groups. *Organization Science*, *23*, 323–340.

Berman, S. L., Down, J., & Hill, C. W. (2002). Tacit knowledge as a source of competitive advantage in the National Basketball Association. *Academy of Management Journal*, *45*, 13–31.

Bloom, M. (1999). The performance effects of pay dispersion on individuals and organizations. *Academy of Management Journal*, *42*, 25–40.

Chambers, E. G., Foulon, M., Handfield-Jones, H., Hanklin, S. M., & Michaels, E. G. (1998). The war for talent. *The McKinsey Quarterly*, *3*, 44–57.

Crane, D. (1965). Scientists at major and minor universities: A study of productivity and recognition. *American Sociological Review*, *29*, 699–714.

Day, D. V., Gordon, S., & Fink, C. (2012). The sporting life: Exploring organizations through the lens of sport. *Academy of Management Annals*, *6*, 397–433.

De Dreu, C. K. W., & Weingart, L. R. (2003). Task versus relationship conflict, team performance, and team member satisfaction: A meta-analysis. *Journal of Applied Psychology*, *88*, 741–749.

ESPN. (n.d.). *Hollinger NBA player statistics*. Retrieved from http://insider.espn.go.com/nba/hollinger/statistics

FIFA. (2010, July 15). *Spaniards dominate dream team*. Retrieved from http://www.fifa.com/newscentre/news/newsid=1274177/index.html

FIFA. (2013, September 7). *Deschamps: We need to persevere*. Retrieved from http://www.fifa.com/worldcup/news/y=2013/m=9/news=deschamps-need-persevere-2169315.html

FIFA. (n.d.-a). *FIFA/Coca-Cola world ranking*. Retrieved from http://www.fifa.com/worldranking/rankingtable/index.html

FIFA. (n.d.-b). *FIFA/Coca-Cola world ranking procedure*. Retrieved from http://www.fifa.com/worldranking/procedureandschedule/menprocedure/index.html

Frank, R. H. (1985). *Choosing the right pond: Human behavior and the quest for status*. Oxford, England: Oxford University Press.

Gould, R. V. (2002). The origins of status hierarchies: A formal theory and empirical test. *American Journal of Sociology*, *107*, 1143–1178.

Greer, L. L., Caruso, H. M., & Jehn, K. A. (2011). The bigger they are, the harder they fall: Linking team power, conflict, congruence, and team performance. *Organizational Behavior and Human Decision Processes*, *116*, 116–128.

Groysberg, B., Polzer, J. T., & Elfenbein, H. A. (2011). Too many cooks spoil the broth: How high-status individuals decrease group effectiveness. *Organization Science*, *22*, 722–737.

Groysberg, B., Sant, L., & Abrahams, R. (2008). When 'stars' migrate, do they still perform like stars? *MIT Sloan Management Review*, *50*, 41–46.

Halevy, N., Chou, E. Y., Galinsky, A. D., & Murnighan, K. (2012). When hierarchy wins: Evidence from the National Basketball Association. *Social Psychological & Personality Science*, *3*, 398–406.

Hollinger, J. (2005). *Pro basketball forecast: 2005-2006*. Dulles, VA: Potomac.

Little, R. J. A., & Rubin, D. B. (1987). *Statistical analysis with missing data*. Hoboken, NJ: John Wiley & Sons.

Malone, T. W., & Crowston, K. (1994). The interdisciplinary study of coordination. *ACM Computing Surveys*, *26*, 87–119.

Marks, M. A., Mathieu, J. E., & Zaccaro, S. J. (2001). A temporally based framework and taxonomy of team processes. *Academy of Management Review*, *26*, 356–376.

McClelland, D. C. (1998). Identifying competencies with behavioral-event interviews. *Psychological Science*, *9*, 331–339.

Muir, W. M. (1996). Group selection for adaptation to multiple-hen cages: Selection program and direct responses. *Poultry Science*, *75*, 447–458.

National Basketball Association. (n.d.-a). *League stats*. Retrieved from http://stats.nba.com/leagueTeamGeneral.html?pageNo=1&rowsPerPage=16

National Basketball Association. (n.d.-b). *2013 NBA All-Star: By the numbers*. Retrieved from http://www.nba.com/2013/news/02/13/2013-nba-all-star-by-the-numbers/

Overbeck, J. R., Correll, J., & Park, B. (2005). Internal status sorting in groups: The problem of too many stars. In M. Thomas-Hunt, E. Mannix, & M. A. Neale (Eds.), *Research on managing groups and teams* (pp. 169–199). St. Louis, MO: Elsevier Press.

Porath, C. L., Overbeck, J. R., & Pearson, C. M. (2008). Picking up the gauntlet: How individuals respond to status challenges. *Journal of Applied Social Psychology*, *38*, 1945–1980.

Ready, D. A., & Conger, J. A. (2007, June). Make your company a talent factory. *Harvard Business Review*, *15*, 69–77.

Ronay, R., Greenaway, K., Anicich, E. M., & Galinsky, A. D. (2012). The path to glory is paved with hierarchy: When hierarchical differentiation increases group effectiveness. *Psychological Science*, *23*, 669–677.

Simmons, B. (2012, July 10). A-Rod is a clubhouse guy? In a manner of speaking, yes? *ESPN.com*. Retrieved from http://sports.espn.go.com/espn/magazine/archives/news/story?page=magazine-20090420-article3

Sports Business Group at Deloitte. (2008). *Deloitte Football Money League 2008*. Retrieved from http://www.deloitte.com/view/en_GB/uk/industries/sportsbusinessgroup/sports/football/703f4159f0c41310VgnVCM3000001c56f00aRCRD.htm

Sports Business Group at Deloitte. (2009). *Deloitte Football Money League 2009*. Retrieved from http://www.deloitte.com/view/en_GB/uk/industries/sportsbusinessgroup/a02ee3dad5181210VgnVCM100000ba42f00aRCRD.htm

Sports Business Group at Deloitte. (2010). *Deloitte Football Money League 2010*. Retrieved from http://www.deloitte.com/view/en_GB/uk/industries/sportsbusinessgroup/6a5fb29b3f907210VgnVCM100000ba42f00aRCRD.htm

Sports Business Group at Deloitte. (2012). *Deloitte Football Money League 2012*. Retrieved from http://www.deloitte.com/view/en_GB/uk/industries/sportsbusinessgroup/sports/football/deloitte-football-money-league-2012/index.htm

Sports Business Group at Deloitte. (2013). *Deloitte Football Money League 2013*. Retrieved from http://www.deloitte.com/view/en_GB/uk/industries/sportsbusinessgroup/sports/football/deloitte-football-money-league-2013/index.htm

Sports Business Group at Deloitte. (2014). *Deloitte Football Money League 2014*. Retrieved from http://www.deloitte.com/view/en_GB/uk/industries/sportsbusinessgroup/sports/football/deloitte-football-money-league/index.htm

Stewart, G. L., & Barrick, M. R. (2000). Team structure and performance: Assessing the mediating role of intrateam process and the moderating role of task type. *Academy of Management Journal*, *43*, 135–148.

Wageman, R. (2001). The meaning of interdependence. In M. E. Turner (Ed.), *Groups at work: Theory and research* (pp. 197–217). Mahwah, NJ: Erlbaum.

Wang, L. (2009). Money and fame: Vividness effects in the National Basketball Association. *Journal of Behavioral Decision Making*, *22*, 20–44.

Wooldridge, J. M. (2009). *Introductory econometrics: A modern approach*. Cambridge, MA: MIT Press.