Running Head: Top Talent in Teams

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

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In Press, *Psychological Science*

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 increases performance and that this relationship would never turn 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 will decrease and eventually turn negative as intra-team coordination suffers. We also predicted that the level of task interdependence would be a key determinant of when more talent would be detrimental versus beneficial. Three archival studies revealed that the too-much-talent effect only emerged when in tasks where team members were interdependent (football and basketball) but not independent (baseball). Our basketball analysis established the mediating role of team coordination. When teams need to come together, more talent can tear them apart.

We're faithful and confident that things are going to come good for us. We've got too much ability and talent in the team for it not to…With the talent and ability that the players have got here, it's only going to bring the best out of everyone. In time, I'm sure we'll bring success.

- Liverpool FC midfielder, Joe Allen, responding to Liverpool's poor start (and eventual lackluster finish) to the 2012-2013 season in an interview with LiverpoolFC.com, Sept. 14, 2012

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 the crux of the poor performance was a lack of talent in an interview with www.fifa.com, Sept. 7, 2013

Joe Allen's and Didier Deschamps's quotes reflect a widely held belief that top talented individuals are the key to the 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 (Ready & Conger, 2007; Chambers, Foulon, Handfield-Jones, Hanklin, & Michaels, 1998). 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 tests 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 robust. 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 negative. That is, at some point there will be too much talent that will impair team performance. In the current research, we present evidence for this too-much-talent effect,

establish when more talent will be detrimental versus beneficial, and demonstrate why this occurs.

The Too-Much-Talent Effect

In formulating our too-much-talent hypothesis, we draw 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 towards coordination and team performance (De Dreu & Weingart, 2003). Indeed, status competition can lead individuals to actively undermine fellow members' efforts so as to advance their own standing within the group hierarchy (Overbeck, Correll, & Park, 2005; Porath, Overbeck, & Pearson, 2008). For example, Groysberg, Polzer, and Elfenbein (2011) found that having a high ratio of high-status members can negatively affect the performance of financial research teams. Likewise, teams composed exclusively of high-testosterone individuals experienced reduced performance because group members fought for dominance (Ronay, Greenaway, Anicich, and Galinsky, 2012). Similar findings have been observed in the domain of poultry science, where too many dominant, high egg-producing chickens in a single colony reduce 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 towards intra-team coordination and performance gets diverted towards 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 a too-much-talent effect will emerge because status conflicts 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 additively contributes to the team outcome (Frank, 1985) and thus less coordination among team members is required.

Based on prior research it is unclear whether task interdependence moderates the relationship between talent and team performance. An additional goal of the current research was therefore to examine whether the too-much-talent-effect would only emerge in interdependent tasks but not in independent tasks. We predicted that the too-much-talent effect – where more talent eventually has a negative effect on team performance – would only occur in contexts where task *interdependence* is pronounced. Conversely, for *independent* tasks, the relationship between talent and team performance will never turn negative and more talent will consistently lead to better performance.

Overview of Studies

The current research tests 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. These archival studies allowed us to establish the point at which more talent has decreasing marginal benefits, as well as whether and when more talent becomes too much talent and turns negative. To test our proposed intra-team coordination mechanism, Study 3 replicated Study 2's findings in the context of the National Basketball Association (NBA) and explored whether decreasing levels of intra-team coordination mediate the relationship between too much talent and reduced on-court performance. To test whether the impact of talent on team performance would not turn negative in relatively independent tasks, Study 4 examined the role of talent in Major League Baseball (MLB). Prior research has articulated that baseball depends far less on coordination and task interdependence than basketball (Halevy et al., 2012). Therefore, we predicted that the relationship between talent and baseball team performance would not turn negative.

Study 1: Lay beliefs about the Relationship between Top Talent and Performance

Study 1a

Method. We examined whether people believe that the relationship between top talent and team performance is linear and monotonic. Thirty-seven participants (21 men; age, M=33.92, SD=11.75) predicted the success of a firm based on the firm's percentage of top-talented

employees. We determined our sample size in advance. Participants were asked about their expectations of the firm's performance (1=*very-poor-performance*, 10=*very-good-performance*) at 10%-increment levels of top-talent concentration (i.e. 10%, 20%, up to 100% of the firm's employees were top talent).

Results. Expectations of firm performance monotonically increased as a function of the percent of top-talent employees. Expected firm performance was highest (M=9.76, SD=0.80 out of maximum performance of 10) when there was nearly 100% top talent. Importantly, people believed that the effect of talent would never turn negative (see Figure 1).

Study 1b

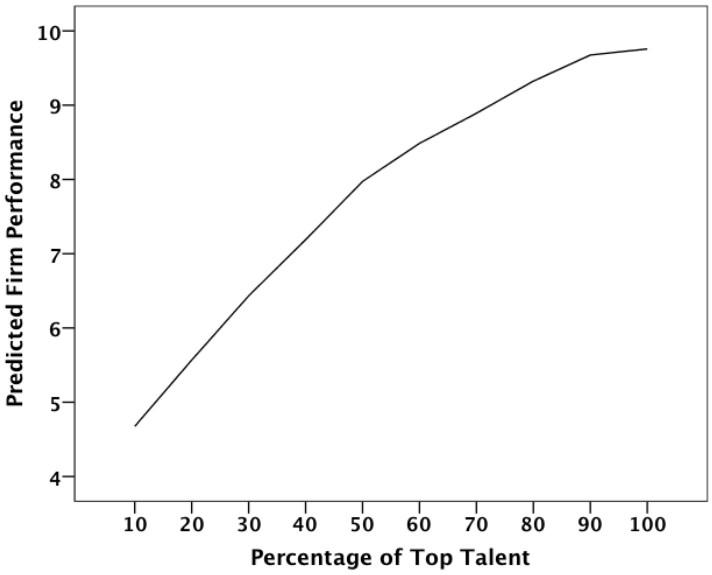
Method. Thirty-seven participants (25 men; age, M=32.49, SD=10.16) assumed the role of a national football (soccer) team manager and selected the combination of players that would maximize their team's chances of winning an international competition. We determined our sample size in advance. Two participants failed an attention check and were omitted from the analyses. Including them does not affect the significance of the results. Participants selected 11 players across four different positions: three forwards and midfielders, four defenders, and one goalkeeper. Participants had an equal number of top talent and non-top talent players to choose from for each position. Top-talent profiles were marked with two gold stars. Participants reported on a 7-point scale, "*How well do you expect your team to perform in the tournament?*"

Results. On average, 9.74 (SD=1.85) top-talent players were selected for the eleven positions (88.57%). Top-talent selections were similar for forwards (90.48%), midfielders (86.67%), and defenders (86.43%), but higher for goalkeepers (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=.20, *SE*=.07, $p<.01$).

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

Figure 1. Perceived Relationship between Percentage of Top Talent and Team Performance



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. Counter to 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) on

national football team performance. This context allowed us to objectively measure both talent and relative team 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 coded by taking the percentage of players within each national team that were contracted by 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 (Houlihan, Parks, Bull, Hawkins, Hearne, & Schmick, 2010). We computed a top talent ratio for each national team roster during the 2010 and 2014 World Cup qualification phase by dividing the number of players in each country's national team 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 to represent the national team. We included only those players who were selected twice or more to represent the national team during the qualification phase. Analyses produced similarly significant results with different cut-off points (i.e., all selected players, including players 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 indicate a greater ratio of top talent.

To establish that this is a valid proxy for top talent, we cross-referenced all players selected for the FIFA 2010 All-Star team, a composition of "the 2010 World Cup most talented players" (http://www.fifa.com). All players selected for the All-Star team were coded as top talent in our sample.[1]

We also conducted robustness tests with different cutoffs of top talent, which replicated the results reported here (see Supplementary Online Materials).

Team performance. Our team performance data was based on the FIFA rankings during the 2010 and 2014 World Cup qualification periods. We chose these periods because both used the new FIFA rankings system (www.fifa.com), which calculates the performance of a given country's team in all international matches on the basis of the games' results, importance of the match, strength of opponents, regional strength, period, and the number of matches considered per year (see www.FIFA.com for calculation procedure). More points indicate better performance.

The 2008-2010 period included 207 national teams. Papua New Guinea was disqualified from participating and was coded as missing. The 2012-2014 period included 209 national teams because three new national teams received FIFA affiliation (Curacao, Sao Tome e Principe, and South Sudan) whereas the Netherlands Antilles national team was dissolved in October 2010.

Control variables. To ensure that our findings are robust to other factors that could influence team performance, we controlled for roster size measured as the total number of players selected 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 using a mixed regression method (Tweedie with log link) to analyze the data because our dependent variable was based on count data that were averaged (Little & Rubin, 1987). Table 1 presents Pearson's *r* correlations for all variables.

Table 1. Descriptive Statistics and Correlations between Variables in Football

	M	SD	1.	2.	3.
1. Team performance	393.30	320.12			
2. Talent	.07	.16	.73***		
3. Roster size	18.53	6.79	.53***	.24***	
4. Games played	8.90	4.65	.54***	.29***	.81***

Note. M = Mean, SD = Standard Deviation.
*** indicates significance at the 99.9% level.

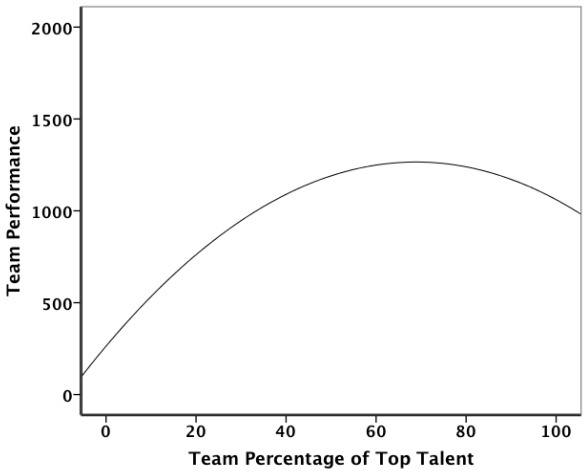
Consistent with the lay intuition documented in Study 1, the linear relationship between talent and football team performance was positive and significant (Table 2, Model 1). However, Study 2 also revealed a significant quadratic effect of top talent: top talent benefited performance only up to a point, after which the marginal benefit of talent decreased and turned negative (Table 2, Model 2) (Figure 2). The linear and curvilinear effects were significant when control variables were omitted (B=5.95, SE=.42, $p < .001$ and B=-4.98, SE=.57, $p < .001$, respectively).

Table 2. The Impact of Talent on Football Team Performance

	Model 1	Model 2
Talent	1.84***	4.58***
	(.16)	(.11)
Talent squared		-4.26***
		(.49)
Roster size	.04***	.04***
	(.01)	(.01)
Games played	.03***	.02**
	(.01)	(.01)
Intercept	4.63***	4.58***
	(.11)	(.11)
Observations	415	415
Corrected Quasi Likelihood under Independence Model Criterion	3400.13	2979.62

Note. Standard errors are reported in parentheses.
, * indicates significance at 99% and 99.9% level, respectively.

Figure 2. A too-much-talent effect in football: top talent benefited performance up to a point after which the marginal benefit of talent decreased and eventually turned negative (Observed Data)



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 effect of talent remained significant after removing 11 outliers (B=5.61, *SE*=.43, p<.001 and B=-5.26, *SE*=.65, *p*<.001).

Study 3: Talent, Coordination, and Performance in the National Basketball Association

To examine the robustness of the too-much-talent effect, Study 3 examined the impact of top talent on NBA basketball team performance during ten seasons. The availability of comprehensive play-by-play data in the NBA also enabled us to test our proposed mechanism that lower levels of intra-team coordination would mediate the relationship between too much talent and diminished performance.

Method

Top talent. We determined our sample size in advance by using NBA team performance in the 10 most recent seasons. Because this analysis focused on teams that played in the same

league rather than national teams, we coded top talent using the Estimated Wins Added (EWA) for all individual players in 30 NBA teams over a period of 10 seasons (2002-2012) available at the time of retrieval, totaling 297 team-level observations (there were only 29 teams in the seasons of 2002-2004 because the "Charlotte Bobcats" were founded in 2004 and entered their first competition in 2004-2005). EWA captures a player's overall contribution to the team as it gives the estimated number of wins a player adds to a team's season total above what a 'replacement player' would produce (Hollinger, 2005). To establish that EWA is a valid proxy for top talent, we cross-referenced all players selected for the NBA All-Star tournament, which brings together "the league's most talented players" (www.nba.com). Ninety-nine percent of players selected for All-Star games during the observed period were coded as top talent in our sample. EWA data was retrieved from ESPN (www.espn.com) for each of the 4,292 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 cut-off is often used to identify, select, and reward talent in organizations (e.g. McClelland, 1998), academia (e.g. Crane, 1965; Auguste, Kihn, & Miller, 2010) 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 team-mean measure because a) it does not accurately reflect the *concentration of top talent* and b) the current measure is conceptually and empirically similar to the measure of top talent that we used in Study 2. Robustness tests with cutoffs of 40% and 20% top talent replicated the results reported here (see Supplementary Online Materials).

We calculated the top talent ratio at the team level by dividing the number of players per team coded as top talent, by the total number of players per team. To get a more reliable measure

of each team's regular composition, we included only those players who played 20% or more of the season's games. Lower (e.g., 10%) and higher (e.g., 30%) cutoff points produce results with the same pattern and level of significance. Higher values indicate higher levels of talent.

Mediator: Intra-team coordination. We used a three-item measure of on-court performance to quantify intra-team coordination. First, we used the average number of *assists* per game; assists are credited when a player passes to a teammate who then scores, indicating team members' ability and willingness to support each other (Berman, Down, & Hill, 2002). Second, we used *field-goal percentage*, which measures 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, which occur when a team retrieves the ball from the opponent after a missed shot and require coordinated actions (Halevy, Chou, Galinsky, & Murnighan, 2012; Wang, 2009). We standardized and averaged these three items ($\alpha = .63$).[2]

Team performance. Team performance was measured using each team's end of year win percentage and was retrieved from the National Basketball Association (www.nba.com) for each of the 10 seasons. Higher values indicate better performance. We obtained identical results when using 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 periods, we also included "lagged performance", which represents 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 (Woodridge, 2009). Table 3 presents Pearson's *r* correlations among all variables.

Table 3. Descriptive Statistics and Correlations between Variables in Basketball

	M	SD	1.	2.	3.	4.	5.	6.
1. Team performance	.50	.15						
2. Talent	.34	.11	.35***					
3. Intra-team Coordination	.00	.75	.63***	.37***				
4. Free-throw percentage	.76	.03	.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

Note. M = Mean, SD = Standard Deviation.
*, **, *** indicate significance at the 95%, 99%, and 99.9% level, respectively.

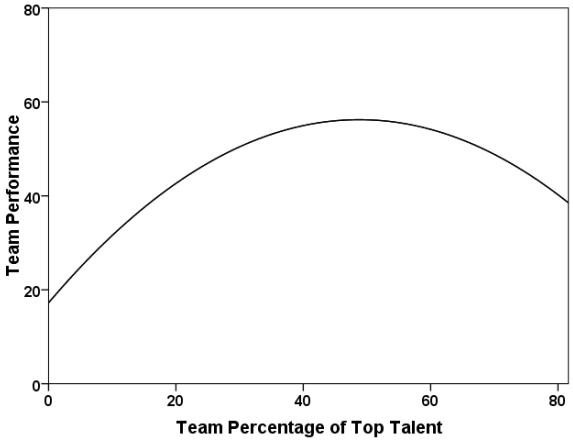
Replicating the effects from football, the linear relationship between talent and basketball team performance was positive and significant (Table 4, Model 1), but only up to a point, after which the marginal benefit of talent decreased and the slope eventually turned negative (Table 4, Model 2) (Figure 3). The linear and curvilinear effects remained significant when all control variables were omitted (B=1.47, *SE*=.44, *p*=.002 and B=-1.45, *SE*=.61, *p*=.02, respectively). The linear and curvilinear effects also remained significant after excluding 22 outliers (B=1.57, *SE*=.33, *p*<.001 and B=-1.94, *SE*=.42, *p*<.001).

Table 4. The Impact of Talent on Basketball Team Performance

	Model 1	Model 2	Model 3
Talent	.35***	1.61***	.91*
	(.10)	(.42)	(.43)
Talent squared		-1.83**	-1.23*
		(.26)	(.57)
Intra-team Coordination			.10***
			(.01)
Free-throw percentage	.54	.56	.17
	(.29)	(.27)	(.24)
Roster size	-.00	-.00	-.01*
	(.00)	(.00)	(.00)
Games played	-.00	-.00	.00
	(.00)	(.00)	(.00)
Lagged performance	.32***	.34***	.22***
	(.05)	(.05)	(.05)
Intercept	-.12	-.30	.28
	(.27)	(.26)	(.24)
Observations	297	297	297
R-squared	.34	.37	.51
F-statistic	14.11***	14.93***	28.84***

Note. Standard errors are reported in parentheses.
*, **, *** indicate significance at the 95%, 99%, and 99.9% level, respectively.

Figure 3. A too-much-talent effect in basketball: Top talent benefited performance up to a point after which the marginal benefit of talent decreased and eventually turned negative (Observed Data)



We found similar effects of too-much-talent on intra-team coordination. As predicted, there was a linear relationship between talent and intra-team coordination (Table 5, Model 1), but only up to a point, after which the marginal benefit of talent decreased (Table 5, Model 2)

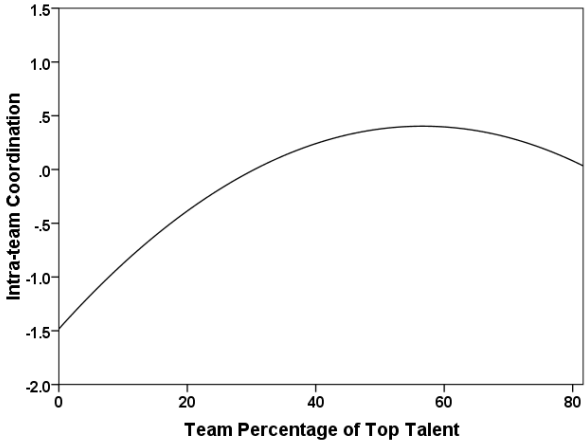
(Figure 4). The linear and curvilinear effects remained significant when all control variables were omitted (B=6.74, *SE*=1.70, *p*<.001 and B=-5.41, *SE*=2.30, *p*=.025, respectively), and also after excluding 14 outliers (B=7.89, *SE*=1.51, *p*<.001 and B=-7.70, *SE*=1.88, *p*<.001).

Table 5. The Impact of Talent on Basketball Intra-team Coordination

	Model 1	Model 2
Talent	2.93***	7.13***
	(.52)	(1.46)
Talent squared		-6.07**
		(1.90)
Free-throw percentage	3.89*	3.94*
	(1.52)	(1.47)
Roster size	.04	.03
	(.02)	(.02)
Games played	.00	.00
	(.01)	(.01)
Lagged performance	1.20***	1.25***
	(.26)	(.26)
Intercept	-5.32***	-5.91***
	(1.14)	(1.13)
Observations	297	297
R-squared	.24	.26
F-statistic	14.14***	12.88***

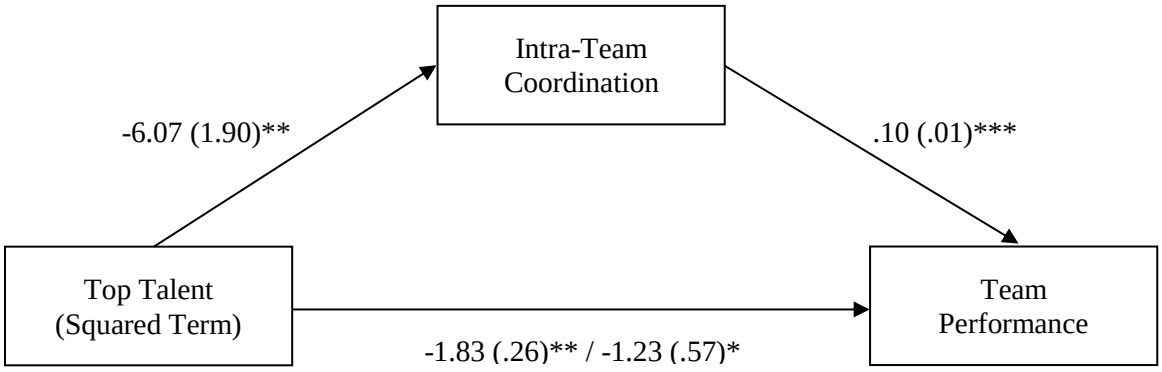
Note. Standard errors are reported in parentheses.
*, **, *** indicate significance at the 95%, 99%, and 99.9% level, respectively.

Figure 4. A too-much-talent effect in basketball: Top talent benefited team coordination up to a point after which the marginal benefit of talent decreased and eventually turned negative (Observed Data)



Mediation analyses. We tested whether intra-team coordination mediated the effects of too-much-talent on performance. Consistent with mediation, the curvilinear effect of top talent on performance was much weaker when intra-team coordination was included in the model (Table 4, Model 3). A Sobel test revealed a significant mediation of the effect of talent on team performance through intra-team coordination (Sobel Z=2.93, $p<.01$; see Figure 5). We also found evidence of mediation when we excluded 22 outliers (Sobel Z=2.17, $p<.05$). Bootstrapping results with 5,000 resamples demonstrated that zero fell outside of the 95% confidence interval for the indirect effect (CI_{Low} = -1.20; CI_{High} = -.12). These analyses demonstrate that teams with too high levels of top talent perform worse because they coordinate less effectively.

Figure 5. Coordination Mediates Curvilinear Effect of Talent on Basketball Team Performance



Note. Regression coefficients are unstandardized. Standard errors are reported in parentheses.
*, **, *** indicate significance at the 95%, 99%, and 99.9% level, respectively.

Study 4: The Moderating Impact of Interdependence in Major League Baseball

Studies 2 and 3 demonstrate that high proportions of top talent reduce team coordination and ultimately undermine team performance. Our theory proposes that the too-much-talent effect will emerge 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 never hurt performance.

To test this hypothesis, Study 4 analyzed Major League Baseball (MLB) data. Unlike football and basketball, Halevy et al. (2012) have demonstrated that baseball involves much less task interdependence among team members. In fact, baseball has been described as ‘‘an individual sport masquerading as a team sport’’ (Simmons, 2010). Therefore, we predicted that the relationship between talent and team performance in baseball would never turn negative.

Method

Top talent. We determined our sample size in advance by including all individual players in 30 MLB teams over a period of 10 seasons (2002-2012) available at the time of retrieval, totaling 300 team-level observations. We coded top talent using the Wins Above Replacement (WAR). WAR measures 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 was retrieved from Baseball Reference (www.baseball-reference.com) for each of the 7,069 player-level observations. We also conducted robustness tests with different cutoffs of 40% and 20% and these analyses replicated the results reported here (see Supplementary Online Materials).

For all seasons we coded whether a player was in the top third (33.3%) of the overall cohort (1) or not (0) and calculated the top talent ratio in an identical way as in Studies 2 and 3. Like in Study 3, we included only those players who played 20% or more of the season’s games.

Lower (e.g., 10%) and higher (e.g., 30%) cutoff points produce identical results. Higher values indicate higher levels of talent.

To be certain that WAR is a valid proxy for top talent, we cross-referenced all players selected for the annual MLB All-Star tournament, which brings together "the league's most talented players selected by managers and fans" (www.mlb.com). Of all players that participated in All-Star games during the observed period, 80% were coded as top talent.

Team performance. Team performance was measured using each team's win percentage and was retrieved from Baseball Reference (www.baseball-reference.com) for each of the 10 seasons. Higher values indicate better performance. We obtained identical results when using number of wins as the dependent measure.

Control variables. We included the same controls as in Study 3.

Results

The same analytical approach and regression model was used as in Study 3. Table 6 presents Pearson's *r* correlations among our independent, control, and dependent variables.

Table 6. Descriptive Statistics and Correlations between Variables in Baseball

	M	SD	1.	2.	3.	4.
1. Team performance	.50	.07				
2. Talent	.34	.11	.72***			
3. Roster size	23.56	2.54	-.22***	-.37***		
4. Games played	161.95	.31	.10	.14*	-.06	
5. Lagged performance	.50	.07	.53***	.34***	-.17**	.05

Note. M = Mean, SD = Standard Deviation.
*, **, *** indicate significance at the 95%, 99%, and 99.9% level, respectively.

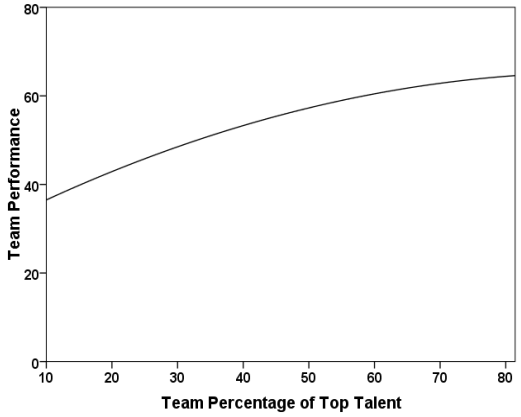
As predicted, we found a significant linear relationship between top talent and team performance (Table 7, Models 1 and 2) but no curvilinear effect (Figure 6). When all control variables were omitted, the linear effect was significant (B=.76, *SE*=.17, *p*<.001). Although the curvilinear relationship was significant (B=-.49, *SE*=.24, *p*=.05), the effect of talent on team performance never turned negative. The curvilinear effect was not significant after excluding 17 outliers (B=.62, *SE*=.13, *p*<.001 and B=-.30, *SE*=.18, *p*>.10).

Table 7. The Impact of Talent on Baseball Team Performance

	Model 1	Model 2
Talent	.41***	.70***
	(.03)	(.15)
Talent squared		-.42
		(.21)
Roster size	.00	.00
	(.00)	(.00)
Games played	.00	.00
	(.01)	(.01)
Lagged performance	.21***	.20***
	(.05)	(.04)
Intercept	-.33	-.38
	(1.68)	(1.71)
Observations	300	300
R-squared	.60	.61
F-statistic	78.85***	93.36***

Note. Standard errors are reported in parentheses.
*, **, *** indicate significance at the 95%, 99%, and 99.9% level, respectively.

Figure 6. The relationship between top talent and baseball team performance never turned negative (Observed Data)



Consistent with our predictions, the effect of top talent never turned negative in a sport where task interdependence is relatively low. There was no too-much-talent effect in baseball that we observed in football and basketball. These results suggest that people's lay beliefs about the relationship between talent and performance are accurate, but only for tasks low in interdependence.

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 increases performance and at no point did they expect the relationship between talent and team performance to turn negative.

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 turned negative

above 50% of top-talent levels.

We predicted that this too-much-talent effect would emerge only when successful outcomes are contingent on a high level of task interdependence among teammates. We found two pieces of evidence supporting this prediction. First, reduced levels of intra-team coordination mediated the too-much-talent effect in basketball. Second, the too-much-talent effect only held when task interdependence was high. When interdependence was relatively lower, as 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 task interdependence by comparing football and basketball with 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 our findings, as well as investigate whether our findings extend beyond the domain of sports. Based on prior research showing that talent affects perceptions of status (Gould, 2002) and that status perceptions can hurt performance (Bendersky & Hayes, 2012), we predict that these effects should apply to other organizational contexts as well (see Groysberg et al., 2008). Indeed, "what connects the domains of sport 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 team during the 2012 European Championship, or the

Miami Heat before the 2010-2011 NBA season, all of which were brimming with individual talent. The current data suggest that selecting fewer top-talented 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 reduced the percentage of top-talented players from 73% to 43%. 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 only won the championship in 2011-2012 when two of their All-Stars were hobbled by injuries, thereby lowering their overall talent but creating 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 intra-team 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 in order to peck at each other in their attempts to establish intragroup standing. In many cases, too much talent can be the seed of failure.

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Endnotes

[1] We could not conduct these analyses for the 2014 data because the World Cup in Brazil did not yet start at the time of writing.

[2] Although this reliability coefficient is lower than in survey research, it is satisfactory given that the three measures included in our coordination index involve objective behavioral measures that are aggregated across multiple individuals, teams, months, and seasons (Halevy et al, 2012).