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When favourites fail: Tournament trophies as reward cues in tennis finals

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When favourites fail: Tournament trophies as reward cues in tennis finals

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Abstract
In tournaments in various sports that feature one–on–one competition, the trophy is sometimes prominently displayed near the athletes during the final. Based on recent research on subtle reward cues, we propose that such trophies have the potential to induce choking under pressure in the match favourites, who are known to be most at risk. To test this idea, we analysed real-life tennis performance data (service performance and rally performance) from professional tournaments. While favourites generally outperformed underdogs during rallies, they did not do so in finals in which (a) large amounts of money were at stake and (b) a trophy was on display near the court. These findings support the idea that tournament trophies may distract favourites by continuously reminding them of what is at stake, and via that route may severely thwart their performance.

Keywords: *Subtle rewards, choking under pressure, tennis performance, favourites vs. underdogs, distraction*

Introduction

Those who are under pressure to excel are at risk of failure. This idea has received support from researchers who have shown that high motivation to succeed may paradoxically cause failure in various performance settings, including the classroom (Rosenthal & Crisp, 2007), the concert hall (Yoshie, Kudo, Murakoshi, & Ohtsuki, 2009), and the football pitch (Jordet & Hartman, 2008). *Choking under pressure*, specifically, refers to the phenomenon that people perform worse than would be expected given their skill, in situations in which perceived pressure is high. Often carried out in the laboratory, research on the topic has identified psychological and physiological mechanisms that explain choking under pressure (for a review, see Beilock & Gray, 2007). Yet, field studies that delineate what real-life factors contribute to choking under pressure are relatively rare. We investigate the impact of subtle cues from the environment–in this case, the trophies that are sometimes displayed near the court during tennis tournaments' finals. We propose that these trophies serve as reward cues that remind players of the incentives that are at stake, and via that route may provoke suboptimal performance in those who are likely to be most at risk: the favourites.

Two main theories, which are thought to be complementary, are often employed to explain how choking under pressure occurs. First, *distraction theory* proposes that performance pressure causes irrelevant thoughts and worries to strain working memory (Baddeley, 2003). This results in a situation in which useful processes (e.g., predicting the ball's future locations) have to compete for limited resources with non-useful ones (e.g., thinking about what happens if one loses the match), thus debilitating performance on tasks that rely on working memory and executive functioning (Beilock, Kulp, Holt, & Carr, 2004; Markman, Maddox, & Worthy, 2006). Second, *explicit monitoring theory* proposes that performance pressure causes athletes to deploy attention to step-by-step components of proceduralised skills that are normally executed routinely and outside of awareness. This dysfunctional way of using attention disrupts performance on tasks that rely on well-learned movements (Baumeister, 1984; Beilock & Carr, 2001).

While these theories are informative as to the question *how* pressure thwarts performance, it is less clear what aspects of performance situations cause such debilitating pressure in the first place. Laboratory studies often use multiple sources of pressure at the same time (e.g., peer pressure, anticipated evaluation, monetary incentives), and thus cannot

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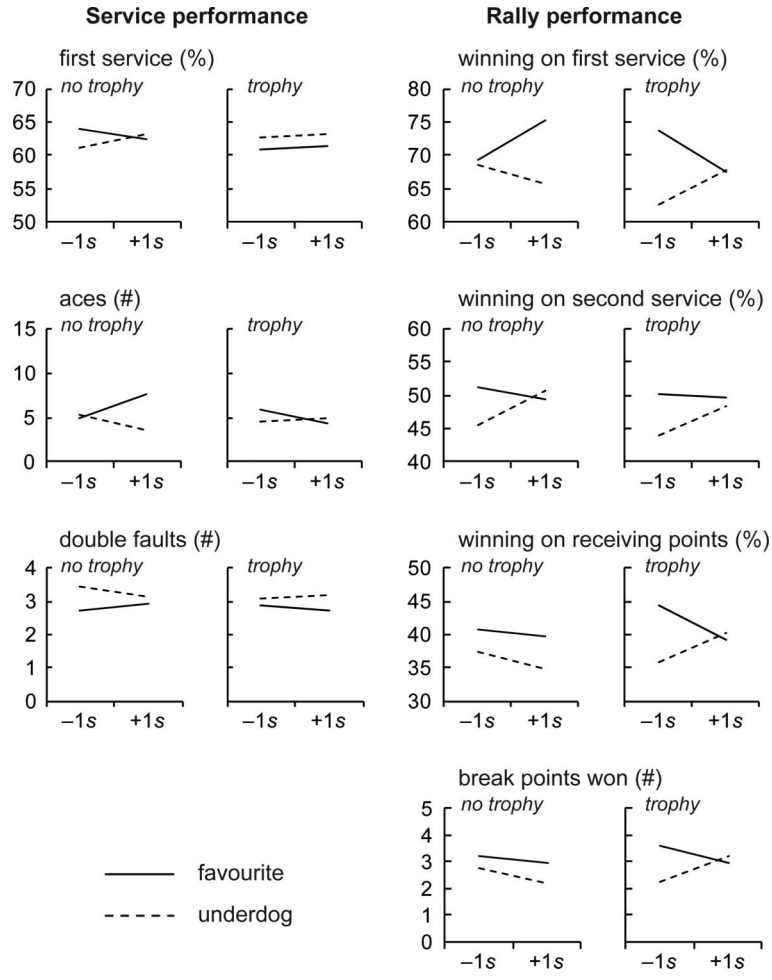

Figure 1. Service and rally performance as a function of (a) how much prize money was at stake, (b) status as a favourite vs. underdog, and (c) whether the trophy was displayed in sight of the players. The horizontal axis of each panel represents the amount of money at stake. The rightmost column of panels reveals the statistically reliable effect that when the trophy was near the court and much money was at stake, favourites no longer outperformed underdogs during rallies.

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serve as a basis for conclusions as to *what* exactly caused the choking under pressure to occur (Beilock & Gray, 2007). Nevertheless, recently researchers have shown that monetary rewards greatly contribute to choking. When excessive amounts of money can be gained, people tend to underperform on all kinds of tasks, including those involving motor skills and those requiring working memory (Ariely, Gneezy, Loewenstein, & Mazar, 2009; Mobbs et al., 2009).

In addition, researchers have shown that some people are more vulnerable than others (e.g., Beilock & Carr, 2005). Importantly, those who have enjoyed previous successes – and thus are the favourites in a competition – face serious additional demands and seem especially prone to choking under pressure (Baumeister, Hamilton, & Tice, 1985; Kreiner-Phillips & Orlick, 1993). This latter idea has received support from recent databank research on soccer penalty shootouts in high-stakes tournaments, which suggests that players tend to miss more penalties after (vs. before) they have gained superstar status (e.g., by becoming ''FIFA World Player of the Year'') (Jordet, 2009). It thus seems to be the case that when pressure is high (e.g., in high-incentive games), favourites are at risk.

Grounded in recent research on the effects of reward cues, we test the possibility that the presence of subtle cues – when they signal that a valuable incentive is at stake – can make a difference as to whether or not favourites choke under pressure. Recent experimental work has shown that reward cues can trigger motivation, also when they are extremely delicate (Bijleveld, Custers, & Aarts, 2009, 2010; Custers & Aarts, 2010; Pessiglione et al., 2007). Moreover, in line with the choking-under-pressure literature, it has become clear that subtle reward cues have the potential to debilitate performance. That is, when reward cues enter conscious awareness, processing of the reward may disrupt other ongoing (mental) processes (Bijleveld, Custers, & Aarts, 2011; Zedelius, Veling, & Aarts, 2011). Clearly, this hurts performance.

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Sometimes, such reward cues are evidently present in finals of tennis tournaments. That is, in some finals, the trophy is prominently displayed near the court, where it can be clearly seen by players. We propose that these trophies function as reward cues, continuously reminding players what is at stake. If this is a lot (i.e., the tournament is very rewarding) and players are at risk for choking (i.e., they are match favourites), we hypothesise that they will perform worse than would be expected given their ability. While favourites should normally be able to outperform underdogs (favourite status is based on world rankings, and thus reflects previous successes), they may fail to do so when they are reminded of the high-incentive situation by a trophy. To test this idea, we conducted a databank study of finals of tennis tournaments, in which we addressed performance as a function of (a) how much prize money was at stake, (b) status as a favourite vs. underdog, and (c) whether the trophy was displayed in sight of the players.

While testing this hypothesis, we take a novel approach to an existing problem in research on choking under pressure. That is, by definition, the diagnosis of choking under pressure requires some estimate of how well people perform under normal circumstances – in the analysis of sports statistics, this requirement has proven difficult to meet, as within-player data are often unavailable or hard to interpret (Beilock & Gray, 2007; Wallace, Baumeister, & Vohs, 2005). We make the assumption that favourites should normally outperform underdogs in direct competition, and take failure on their part to do so as an indicator of substandard performance. Our approach, then, does not rely on within-player statistics and thus overcomes commonly encountered problems with assessments of choking-under-pressure based on existing sports statistics.

We looked at two aspects of tennis performance – service performance and rally performance – in order to be able to speculate about the mechanism by which the observed choking under pressure, if any, occurred. Recall that choking under pressure is thought to occur via distraction (in the case of aspects of sports that rely on working memory), explicit monitoring (in the case of aspects of sports that rely on the execution of learned skills), or both (in the case of aspects of sports that rely on both working memory and skill execution). Specifically, we suggest that rally performance (vs. service performance) relies more heavily on working memory, and should thus be relatively vulnerable to distraction-based choking under pressure. Good performance in rallies relies on consideration of multiple options simultaneously and on constant updating of information, which are sports-related functions that are thought to be supported by working memory (Beilock & Gray, 2007). In line with the above reasoning, researchers have shown that straining working memory hurts the quality of strategic decisions in dynamic play situations (Rowe & McKenna, 2001), even for experts who can efficiently process tennis-related visual information (e.g., Williams, Ward, Knowles, & Smeeton, 2002). Yet, working memory load has proven *not* to impair experts' ability to putt a golf ball (Beilock, Carr, MacMahon, & Starkes, 2002), a skill that is at least somewhat similar to serving in tennis (i.e., both are single, untimed executions of well-practised motor skills).

The above leads us to suggest that distraction-based choking under pressure should mainly impact rally performance, and to a lesser extent service performance. By contrast, explicit monitoring-based choking under pressure should impact service performance at least as strongly, as this mechanism of choking under pressure is known to specifically harm such well-learned skills (Beilock & Gray, 2007). While the main objective of the current research is to test *whether* money at stake and trophies near court together impair favourites' performance, looking at service vs. rally performance thus enables us to speculate *how* any of such performance impairments may have come about.

Method

Selection of games

We used the following criteria for inclusion of games in our sample. First, the game had to be a final of a professional tennis event played in 2007, 2008, or 2009, ranging in standing from relatively modest (ATP World Tour 250 series, WTA International) to very prominent (Grand Slam). Second, of these finals, specific player and performance statistics had to be available (i.e., pertaining to service and rally performance). We used OnCourt software (KANsoft, Russia) to extract these statistics, which turned out to be available for 324 (87%) of all finals. Finally, and this was critical, we needed to know whether or not the trophy was visible to the players during the match. To this end, we contacted the administrators of the tournaments (that still existed), asking the specific question whether the trophy was in clear sight of the players during the final? In other words: During the match, was the trophy near the court? Or was it somewhere else (and hence out of sight) during the match? In total, responses to our inquiries yielded data on 106 matches, 49 of which (46%) featured a trophy in sight.

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Selection of performance indicators

Of the available performance indicators, three exclusively reflected skilled service performance: (1) first service percentage (i.e., the percentages of services that land in the correct box); (2) number of aces; and (3) number of double faults. The other four predominantly relied on rally performance: (1) percentage of points won after first service; (2) percentage of points won after second service; (3) percentage of points won on receiving points; and (4) number of break points won.

Data preparation

To determine which of the players were the favourites and which were the 'underdogs', we looked up the world ranking for each of the players at the time the tournament was played. For example, the favourite of the 2009 Rogers Cup final was Andy Murray (world ranking 3, at the time), while Juan Martin del Potro (world ranking 6) was classified as the underdog in that match. The level of reward that was at stake was operationalised as the cash prize that was awarded to the winner. We chose to use this variable (i.e., instead of the amount of ATP or WTA points that was at stake), for two reasons. First, using money as an independent variable makes our study more comparable to experimental research on choking under pressure, in which money is often a central aspect of pressure-induction procedures. Second, the ATP ranking system was changed in 2009, rendering studies from before vs. after that year incomparable. Also, the ATP ranking system is different from the WTA system, which would introduce unwanted bias that is rather complex to control for. As visual inspection of the distribution of the money variable revealed positive skewness, a square root transformation was applied. However, highly similar findings were obtained when applying a logarithmic transformation, or no transformation at all. The independent variables and covariates that were continuous (see below) were centred before they were used in analyses. Two multivariate outliers were identified and deleted (following the Cook's distance method proposed by Chatterjee & Hadi, 2006); this did not affect the overall pattern of results.

Analytic strategy

To test the hypothesis that the amount of money at stake was related to worse performance for favourites when a trophy was near the court, we conducted analyses for service (i.e., first service percentage, number of aces, number of double faults) and for rally performance (i.e., percentage of points won on first service, percentage of points won on second service, percentage of receiving points won, number of break point conversions) separately. Specifically, for each group of performance indicators, we tested a multivariate general linear model, including trophy presence (dichotomous) and the amount of money that was at stake as predictors. Moreover, sex and match duration (conceptualised as the total points played in the match) were included as covariates in the analyses, as these are by nature related to certain aspects of tennis performance (e.g., number of aces) and thus should be controlled for. These analyses were conducted on the match level, with status (i.e., favourite vs. underdog) as a within-match variable (Kenny, Kashy, & Cook, 2006). Finally, we explored whether trophy presence and monetary reward could be used to predict outcomes of tennis matches as a whole. Throughout the analyses, interactions were interpreted following procedures suggested by Aiken and West (1991).

Results

Preliminary analyses

To test whether having a trophy near court was related to the amount of prize money of a tournament, we computed the point-biserial correlation between the two variables. Importantly, this correlation was low, $r\ (102) = 0.09$, and not significant, $P = 0.35$, indicating that trophy presence was independent of monetary reward. To exclude the possibility that trophy presence was confounded with certain styles of playing, we tested whether trophy presence was associated with certain court surfaces (clay, grass, hard court, carpet). This association was not significant, $\chi^2(3) = 0.75$, $P = 0.86$, showing that trophies were equally likely to be displayed near courts of different surfaces. Descriptive statistics of the main independent and dependent variables are presented in Table I.

Service performance

For the analysis of service performance, we first looked at the multivariate effects, to test the overall pattern across the three service performance indicators. There were only main effects of sex, $F\ (3, 95) = 13.06$, $P < 0.001$, $\eta^2_p = 0.29$, and match duration, $F\ (3, 95) = 27.51$, $P < 0.001$, $\eta^2_p = 0.47$. These effects indicated that men tended to hit more aces and less double faults than did women, and that players hit more aces and more double faults when matches were longer. As none of the effects related to our hypotheses were significant on the multivariate level, we did not further consider the univariate analyses that addressed specific performance indicators. To be

Table I. Descriptive statistics of continuous variables.

Independent Variable	*M (s); Mdn*
Monetary Reward (10k$)	32.6 (43.3); 8.8
Monetary Reward (transformed)	4.65 (3.33); 3.0

	M (s)	
Dependent Variables	*Favourites*	*Underdogs*
Service Performance		
First service (%)	62.2 (9.2)	62.7 (8.3)
Aces (#)	5.9 (6.8)	4.8 (5.3)
Double faults (#)	2.8 (2.4)	3.1 (2.2)
Rally Performance		
Winning on first service (%)	71.7 (11.3)	66.8 (11.1)
Winning on second service (%)	50.6 (12.9)	47.7 (11.8)
Winning on receiving points (%)	40.4 (9.7)	36.7 (9.7)
Break points won (#)	3.1 (2.0)	2.5 (2.0)

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sure, we re-ran these analyses with aces and double faults as percentages rather than as absolute frequencies. This yielded highly similar (null) findings. The pattern of estimated means of the performance indicators is depicted in Figure 1.

Rally performance

For the rally performance analysis, we also looked at the multivariate effects first to test the overall pattern of performance when the four rally performance indicators are considered together. There appeared to be main effects of sex, F (4, 95) = 12.12, $P < 0.001$, $\eta^2_p = 0.34$, match duration, F (4, 95) = 11.44, $P < 0.001$, $\eta^2_p = 0.33$, and status, F (4, 95) = 3.23, $P = 0.016$, $\eta^2_p = .12$. These effects were qualified by a status × match duration interaction, F (4, 95) = 5.02, $P = 0.001$, $\eta^2_p = 0.17$. Critically, the status × monetary reward × trophy presence three-way interaction was also present, F (4, 95) = 3.36, $P = 0.013$, $\eta^2_p = 0.12$. To interpret these general effects, we looked at the univariate analyses for the specific performance indices separately. For the sake of brevity, we only reported the effects of covariates when they interacted with other factors. Estimated means are presented in Figure 1.

Winning on the first service. For percentage of winning on the first service, there was a main effect of status, F (1, 98) = 11.68, $P = 0.001$, $\eta^2_p = 0.11$, indicating that favourites won more often on their first service than did underdogs. Also, there was a status x match duration interaction, F (1, 98) = 4.10, $P = 0.046$, $\eta^2_p = 0.04$, reflecting that smaller performance differences between favourites and underdogs were associated with longer matches. More importantly, the predicted three-way interaction was significant, F (1, 98) = 9.79, $P = 0.002$, $\eta^2_p = 0.09$. To interpret this interaction, we looked separately at matches with vs. without a trophy near the court. This allowed us to specifically test how monetary reward affected performance, given the presence (vs. absence) of a trophy.

For matches in which the trophy was not present, we found a main effect of status, F (1, 53) = 5.44, $P = 0.024$, $\eta^2_p = 0.09$, indicating that favourites performed better than underdogs. Furthermore, money had a slightly different effect on underdogs vs. favourites, as indicated by a marginally significant status × monetary reward interaction, F (1, 53) = 3.11, $P = 0.083$, $\eta^2_p = 0.06$. As this effect seemed rather incidental (i.e., it did not show on other indicators), we chose not to provide a post-hoc interpretation.

For matches in which the trophy was present near the court, we also found a main effect of status, F (1, 43) = 5.91, $P = 0.019$, $\eta^2_p = 0.12$. Moreover, the predicted status × monetary reward interaction was significant, F (1, 43) = 7.66, $P = 0.008$, $\eta^2_p = 0.16$, that revealed that favourites and underdogs were differentially affected by money. Specifically, when relatively little money was at stake ($-1s$), favourites clearly outperformed underdogs, F (1, 43) = 12.33, $P = 0.001$, $\eta^2_p = 0.22$. However, when much money was at stake ($+1s$), favourites performed no better than underdogs, $F < 1$, indicating worse performance than what would be expected on the basis of their world rankings.

Winning on the second service. Next, we analysed the percentage of winning on the second service. No effects of interest proved significant.

Winning on receiving points. For the percentage of receiving points won, there was again an effect of status, F (1, 98) = 7.67, $P = 0.007$, $\eta^2_p = 0.07$. Furthermore, the status × monetary reward × trophy presence three-way interaction approached significance, F (1, 98) = 3.59, $P = 0.061$, $\eta^2_p = 0.04$, revealing a similar pattern as for points won on the first service.

For matches in which the trophy was not present, favourites outperformed underdogs, F (1, 53) = 4.60, $P = 0.037$, $\eta^2_p = 0.08$. This was not qualified by a status × monetary reward interaction, $F < 1$. For matches in which the trophy was visibly present, however, the status × monetary reward interaction, F (1, 43) = 5.14, $P = 0.029$, $\eta^2_p = 0.11$, again indicated that favourites and underdogs were differentially affected by money: When little money was at stake ($-1s$), favourites strongly outperformed underdogs, F (1, 43) = 6.67, $P = 0.013$, $\eta^2_p = 0.13$, but favourites performed no better than underdogs when relatively more money ($+1s$) was at stake, $F < 1$, indicating substandard performance.

Break points won. For the number of break points converted, there was a main effect of status, F (1, 98) = 4.99, $P = 0.028$, $\eta^2_p = 0.05$. Moreover,

there was a marginally significant status × monetary reward × trophy presence three-way interaction, F (1, 98) = 3.02, P = 0.086, η^2_p = 0.03, which suggested the presence of the same pattern as for the previous indicators.

Indeed, for matches in which the trophy was not present, favourites slightly outperformed underdogs, as evidenced by a marginally significant effect of status, F (1, 53) = 3.38, P = 0.072, η^2_p = 0.06. This effect was not qualified by the status × monetary reward interaction, $F < 1$. For matches in which the trophy was visibly present, however, the status × monetary reward interaction was significant, F (1, 43) = 4.07, P = 0.050, η^2_p = 0.09, showing that favourites and underdogs were differentially affected by money. In line with the previous indicators, it appeared that favourites won more break points than did underdogs, but only when little money ($-1s$) was at stake, F (1, 43) = 5.02, P = 0.030, η^2_p = 0.11. In the face of a larger monetary reward ($+1s$), there was no difference, $F < 1$, indicating substandard performance by favourites.

Rank difference as a potential moderator

While these results imply a key role for whether the player in question is the favourite or the underdog, one might argue that the rank difference between the two is equally important. For instance, it could be the case that the effects established above are driven by the matches in which underdogs and favourites are far apart on the world ranking list. For that reason, we also explored the influence of differences in rank between the favourite and the underdog as a potential moderator. We re-ran the above analyses while including the dichotomised variable (median rank difference of the sample = 13 places) that indicated whether the difference between the players was relatively small (≤13) or relatively large (> 13), in terms of world rankings. This analysis revealed no main effect of this factor, nor any (higher-order) interactions, multivariate F's < 1.84. Critically, the status × monetary reward × trophy presence three-way interaction was still intact, multivariate F (4, 91) = 4.14, P = 0.004, η^2_p = 0.15. This analysis suggests that the role of being the favourite has an impact by itself, and that this impact is independent of the extent to which there are objectively quantifiable ability differences between the favourite and the underdog.

Match outcome

While the above results paint a fine-grained picture of tennis performance as a function of trophy presence, monetary reward, and favourite status, we also explored whether these variables have the potential to change match outcomes. Using sex and match duration as covariates again, we conducted a logistic regression with trophy presence and monetary reward as independent variables, predicting whether the favourite won (1) or not (0). This analysis yielded no main effects of trophy presence or monetary reward, and no interaction between the two, Wald χ^2's < 1.25, P's > 0.26. Thus, whereas trophy presence and money at stake showed impaired performance in favourites on more fine-grained performance measures, our analysis suggests that they do not directly affect match outcomes.

Furthermore, we analysed whether trophy presence and monetary reward were related to the proportion of points won by the favourite. Our general linear model analysis, again with the same covariates, yielded the predicted trophy presence x monetary reward interaction, F (1, 98) = 5.39, P = 0.022, η^2 = 0.05. Follow-up analyses suggested that when there was no trophy near the court, monetary reward was not significantly related to the proportion of points won by the favourite, $\beta = -0.03$, $t(55) = 0.22$, P = 0.681. Instead, when the trophy was on display, more money at stake was related to a smaller proportion of points won by the favourite, $\beta = -0.34$, $t(45) = -2.40$, P = 0.021. This finding thus shows that the pattern of results we found on the individual rally performance indicators was still intact on the aggregate level, providing strong support for our hypothesis.

Discussion

Whereas favourites normally outclass underdogs on several aspects of performance in the finals of tennis tournaments, the present study shows that they fail to do so in matches in which (a) a lot of money is at stake and (b) a trophy is displayed in their sight. This effect can be explained based on the idea that favourites are more vulnerable to choking under pressure than are underdogs (Baumeister et al., 1985; Jordet, 2009), and that monetary rewards may trigger choking when just a subtle reward cue near the court – a trophy – continuously reminds players of what is at stake. Interestingly, these instances of lower-than-expected performance emerged only on measures that reflected performance during rallies (i.e., percentage of points won after the first service, percentage of receiving points won, number of break points won), and not on indices that reflected service performance (i.e., first service percentage, number of aces, number of double faults).

As it seems reasonable to assume that rally performance relies on working memory to a greater extent than does service performance, the present findings suggest that the choking under pressure that we observed originated in distraction. Indeed,

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distraction-based choking under pressure is known to specifically impact tasks that require working memory (Beilock & Gray, 2007). Somewhat speculatively, the trophy – together with much money being at stake – may have induced favourites to use their working memory for irrelevant thoughts (e.g., ruminating) rather than for tennis-relevant processes (e.g., predicting the direction of the ball), thereby interfering with effective performance during rallies. By contrast, the present data provide no evidence that the service, which basically is the execution of a well-learned skill, suffers from pressure. Thus, the current data suggest that courtside trophies primarily impair performance in favourites by triggering distracting thoughts, and not so much by changing favourites' attentional focus.

While the latter null finding is intriguing and somewhat unexpected, it is in line with recent research that shows that monetary rewards (as compared to other stressors) are specifically associated with worries about the situation's outcome, making people more sensitive to distraction, but not to explicit monitoring (DeCaro, Albert, Thomas, & Beilock, in press). Also, the null finding for service performance may be explained from the idea that specific types of training can render well-learned skills relatively resistant to choking under pressure (i.e., practice while paying step-by-step attention to skill execution helps players to get used to pressure situations, which have the same effect on attention). Of course, the players in our sample probably received all kinds of skill training, including this specific type. However, to prevent choking in situations in which working-memory functioning is vital (such as during rallies), training regimes that involve practising rallies under actual stress or under cognitive load (e.g., playing rallies while rehearsing digit strings) are likely to have additional merit. While perhaps less common in professional tennis, players may learn during such training to control irrelevant thoughts and worries when it matters most – an ability that may have been very useful to the favourites in our sample (see Beilock, 2010).

As was outlined in the introduction, the present research also contributes to the choking under pressure literature in a methodological sense, by suggesting a new approach to understanding sports statistics. While leading definitions of choking employ *lower-than-expected performance* as a diagnostic criterion (Beilock & Gray, 2007), the diagnosis of choking requires some estimate of 'normal' performance, which has proven difficult to extract from sports statistics. In the present work, we took a novel approach to establishing such an estimate based on the reasoning that, under normal circumstances, favourites can be expected to outperform underdogs. Accordingly, when a favourite fails to do so, their performance can thus reasonably be considered to have suffered from choking – after all, it was lower than expected based on their ranking. Importantly, this approach operates within the confines of mainstream definitions of choking, and can potentially be applied to all sports that are characterised by zero-sum, one–on–one competition (e.g., tennis and judo, but not golf and speed skating). These may prove fruitful domains for studying choking under pressure, as they allow for a relatively clean post-hoc diagnosis of when choking under pressure has (vs. has not) occurred.

Although the current approach opens up new avenues for research, the analysis of dynamic one–on–one sports data is by nature limited in that it is not always clear whether a reference athlete's substandard performance is caused by the opponent improving his or her game and the reference athlete not keeping up, or whether it is caused by the reference athlete making mistakes. In part, the present approach avoids this problem by operationalising ''normal performance'' relative to the opponent rather than as an absolute estimate. Still, it is important to keep this limitation in mind, especially when analysing aspects of sports in which the one player's failure equals the other's success (e.g., rally performance in tennis, scoring points in judo). Accordingly, the question of how choking-related mechanisms affect the game dynamics of one–on–one sports (e.g., how they affect individual players' cognitions) remains an interesting topic for further study.

Most importantly, the present study suggests that the seemingly trivial presence of a trophy near the court – just a subtle reward cue – can have substantial consequences with respect to what tennis finals look like. When the trophy is on display during a high-stakes final, this may well delight spectators with an exciting match.

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