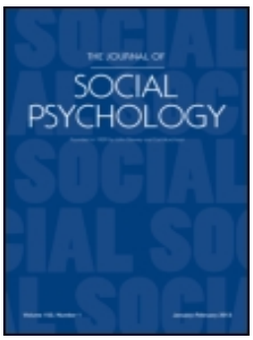

The Journal of Social Psychology

ISSN: 0022-4545 (Print) 1940-1183 (Online) Journal homepage: http://www.tandfonline.com/loi/vsoc20

Self-Fulfilling Prophecies in Ability Settings

Jason Weaver, Jennifer Filson Moses & Mark Snyder

To cite this article: Jason Weaver, Jennifer Filson Moses & Mark Snyder (2016) Self-Fulfilling Prophecies in Ability Settings, The Journal of Social Psychology, 156:2, 179-189, DOI: 10.1080/00224545.2015.1076761

To link to this article: http://dx.doi.org/10.1080/00224545.2015.1076761

Accepted author version posted online: 27 Jul 2015.
Published online: 27 Jul 2015.

Submit your article to this journal

Article views: 1586

View related articles

View Crossmark data

Full Terms & Conditions of access and use can be found at
http://www.tandfonline.com/action/journalInformation?journalCode=vsoc20

Download by: [University of Colorado at Boulder Libraries] **Date:** 23 February 2017, At: 21:01

The Journal of Social Psychology, 156: 179–189, 2016
Copyright © Taylor & Francis Group, LLC
ISSN: 0022-4545 print / 1940-1183 online
DOI: 10.1080/00224545.2015.1076761

Routledge
Taylor & Francis Group

Self-Fulfilling Prophecies in Ability Settings

JASON WEAVER
Colorado College

JENNIFER FILSON MOSES
Pierce College

MARK SNYDER
University of Minnesota

ABSTRACT. Previous research has demonstrated that one person's expectations can influence the behavior of another person, thereby creating a self-fulfilling prophecy. This study examined the effects of ability-based expectations in an experiment in which some participants ("coaches") were assigned false expectations of the basketball free-throw shooting ability of other participants ("players"). Coaches allocated more opportunities to players for whom the false expectation was positive, and fewer shots to players for whom the false expectation was negative. In turn, players who were allocated more shots made a higher percentage of them, thereby confirming their coaches' expectations about their shooting ability, and were more confident in their shooting ability following the task, than players who were allocated fewer shots.

Keywords: expectations, Pygmalion effect, self-fulfilling prophecy, sports

EXPECTATIONS ARE CENTRAL TO SOCIAL SITUATIONS whether the situation is a first encounter with a potential date or lunch with an old friend, people typically hold expectations regarding their interaction partner's personality, preferences, and abilities. These expectations can prove useful (knowing that a friend is extraverted may steer one's plans towards a party), but can also be harmful if the expectation is incorrect (if the friend is actually an introvert, they may not enjoy the party). Research on expectations has revealed that people who hold expectations (perceivers) will often shape interactions such that their expectations of other people (targets) come to be confirmed (for a review, see Snyder & Stukas, 1999). This confirmation can come in two forms: *perceptual confirmation,* in which the perceiver interprets the target's actions as consistent with the expectation; and *behavioral confirmation,* in which the target's behavior becomes objectively consistent with the expectation.

Address correspondence to Jason Weaver, Colorado College, Department of Psychology, 14 East Cache La Poudre St., Colorado Springs, CO 80903, USA. E-mail: jason.weaver@coloradocollege.edu
Color versions of one or more of the figures in the article can be found online at www.tandfonline.com/vsoc.

A variety of experiments have demonstrated behavioral and perceptual confirmation effects. For example, in studies of expectations about interpersonal traits, perceivers' expectations regarding physical attractiveness and sociability (Snyder, Tanke, & Berscheid, 1977), hostility (Snyder & Swann, 1978), and rejection (Downey, Freitas, Michaelis, & Khouri, 1998) have been demonstrated to lead to perceptual and behavioral confirmation.

Parallel to the research on confirmation of impressions of personal attributes in social interaction, other studies have examined the effects of expectations on task performance. Rosenthal and Jacobson (1968) conducted a study of classroom performance in which they manipulated teacher expectations at the beginning of a school year. Students whose teachers had been randomly assigned a high expectation of their abilities outperformed students whose teachers had not been assigned an expectation. This boost in a student's performance due to high teacher expectations is often referred to as the Pygmalion effect (see McNatt, 2000; Kierein & Gold, 2000 for meta-analyses).

Thus, expectations have been examined experimentally in contexts ranging from physical attractiveness (Snyder et al., 1977) to elementary school grades (Rosenthal & Jacobson, 1968). Another setting in which it may be possible to examine the power of expectations is to employ self-report and observational methodologies in a sport setting. Athletics is an excellent context for examining Pygmalion effects because expectations abound regarding players' abilities, and most sports have a clear operational definition for assessing athlete performance (scoring). Furthermore, coaches must form expectations of their players' abilities and act on these expectations to use their players most effectively.

Indeed, there have been some attempts to examine the role of expectations in sport settings. Wilson and Stephens (2007) interviewed coaches to determine their expectations of players' abilities, and interviewed players to determine the amount of negative feedback and workload they received from their coach; they found that coaches gave less negative feedback and more workload to players expected to have high ability compared to those whom they expected to have low ability. Other studies have used behavioral coding to demonstrate that coaches provide higher quality (Horn, Lox, & Labrador, 2001) or more positive (Rejeski, Darracott, & Hutslar, 1979) feedback to high expectation players than low expectation players, especially prior to and during the playoffs (Solomon, Goldern, Ciapponi, & Martin, 1998; Solomon & Kosmitzki, 1996).

However, as informative as these studies are, their observational designs do not allow for strong causal inference about the effects of expectations on performance, and leave open the possibility that their findings could be due to coaches' accurate evaluations of players' abilities (based on their performance histories) rather than the direct effects of false expectations. In other words, low ability players' increased criticism and decreased playing time may reflect their actual poor performance, not the coaches' negative expectation of their performance. Therefore, one goal of the present study is to examine the influence of expectations in an athletic setting, using an experimental methodology, to document the possible causal relations between expectations and performance. Additionally, by extending the experimental investigation of expectation confirmation to an athletic setting, the present research has the potential to extend the domain of applicability of the construct of expectation confirmation to a new and different domain (i.e., athletics) and thereby contribute to the scientifically important goal of providing evidence for the generality across domains of applicability of the phenomenon of the confirmation of expectations in interactions between perceivers and targets.

In the present research, we aim to clarify the causal direction of the links between expectations and performance in athletic contexts by experimentally manipulating expectations and measuring their effects on performance in a setting that is free of any influence of prior performance histories on expectations and performance. Specifically, we focused on basketball. In basketball, when players are fouled while shooting they are awarded free throws taken 15 feet from the basket. Because free throws are uncontested, they provide a controlled setting in which to assess shooting accuracy. In our study, some participants ("coaches") were given expectations about other participants' ("players") free-throw shooting ability and were asked to distribute shots to players based on these expectations. We manipulated coaches' expectations of their players' abilities and then asked the coaches to choose players to shoot free throws for the team. Because coaches were not allowed to speak to their players, the only way that they could communicate their expectations was through their allotment of free-throw opportunities.

In this research, we examined six specific hypotheses, grounded in theory and research on the effects of expectations on behavior in social situations. Specifically, we hypothesized that, in accord with the literature on the confirmation of expectations in performance settings, the manipulated expectations would influence player performances (H1), and that the effect of expectations on performance would be mediated by the number of opportunities each player was given (H2). That is, in H1 and H2, we predicted that coaches would use the false information provided to them to allocate opportunities among players, and that these allocations would influence player performance. In addition, we predicted that the number of opportunities given to players would predict player confidence at the end of the experiment (H3), and that this effect would be mediated by performance (H4). That is, in H3 and H4, we expected that the opportunities provided to each player would function as feedback to the player, influencing the player's performance and, in turn, the player's performance would influence his or her confidence at the end of the session. Finally, we predicted that the number of opportunities given by coaches to players would predict coach perceptions of player ability (H5), and that this effect would be mediated by player performance (H6). Thus, in H5 and H6, we proposed that the coach's allocation of opportunities would influence player performances, and that these performances would shape the coach's perceptions of players' abilities at the end of the session.

METHOD

Participants

A total of 127 (79 male, 48 female) university students participated in this experiment. All participants were recruited via the psychology department's online scheduling tool. The tool is available to students in all psychology courses that offer extra credit for research participation (primarily, but not limited to, introductory-level courses). The advertisement for the study mentioned that the study involved basketball, but that no experience was necessary. Participants only had contact with the other participants on their "team" and the researchers. All teams had three (7 teams), four (14 teams), or five (10 teams) participants, and within a team, all participants were of the same gender. No basketball experience was necessary to participate; however, many participants expressed that they had played basketball at some point in their lives.

Procedure and Materials

All procedures and materials were approved by the IRB prior to data collection. Participants were greeted by the experimenter at the university's recreation center, and asked to sign a consent form. Participants were told that they were participating in a study examining the effects of coaching strategies and communication on performance. The experiment consisted of two phases.

In the first phase, participants completed a packet of personality surveys, and individually shot 30 free throws. While participants completed these surveys in the lobby, the experimenter brought each participant to the gym and asked him or her to shoot 30 free throws with a men's regulation size basketball while another experimenter recorded shooting percentages. The survey packet included the Iowa-Netherlands Comparison Orientation Measure (Gibbons & Buunk, 1999), Self-Monitoring Scale (Snyder & Gangestad, 1986), Task and Ego Orientation in Sport Questionnaire (Duda, 1989), Fear of Negative Evaluation Scale (Leary, 1983), and Locus of Control (Rotter, 1966). This packet was intended as a filler task to prevent participants from becoming suspicious as to why they were not allowed to watch the other participants shoot, particularly the coaches who would later be given information from this stage. When the participants had taken 30 free throws, they were taken back to the lobby to finish the surveys.

In the second phase, one participant was randomly assigned as the leader ("coach") of the team. Coaches were not explicitly told that they had been randomly assigned to this role, but if they asked, they were told that the choice was random and not based on their performance in the first phase. Coaches were told that their task was to select players from their teams to shoot free throws and that their goal was to maximize their team's overall percentage for 50 shots. Coaches were then given a set of manipulated shooting scores that were ostensibly each player's first phase shooting scores. In actuality, these scores were randomly assigned to participants and had no bearing on the actual Phase 1 scores.

Because one player was designated as the coach for each team and the remaining participants were designated as players, teams of three participants had two players, teams of four participants had three players, and teams of five participants had four players. For teams with two players, one player was assigned a random score generated from a normal distribution with a mean of 12 and the other player was assigned a score from a normal distribution with a mean of 20. Teams of three players were assigned scores from normal distributions with means of 9, 16, and 23, and teams of four players received scores from normal distributions with means of 9, 14, 19, 24 (all SDs $= 1.1$). This system of generating scores ensured that each team had a similar distribution of scores and that scores were roughly evenly spaced in the aggregate, but that any given team did not have scores that were perfectly evenly spaced. Evenly spaced scores (e.g., 10, 15, 20) would likely have aroused suspicion in many of the coaches.

In each trial, the coach selected one player to take the shot for the team. The experimenter recorded which player the coach selected for each trial and whether the player made the shot. The coaches were asked not to communicate with the players other than indicating which player should shoot. This instruction was justified by explaining that the team had been assigned to the "no communication" condition, per the cover story. Coaches were allowed 50 of these trials, and following the team shooting task, all participants rated their own shooting ability, as well as their evaluation of the shooting ability of the other participants. Following these ratings, participants were debriefed regarding the goals of the study and false expectations given to the coach, asked not to discuss the study with their acquaintances, and dismissed.

Design

The manipulated expectations served as our independent variable, with Phase 2 performance, self-evaluations, and coach evaluations constituting our dependent variables. The number of opportunities that coaches gave each player was expected to mediate the relation between our manipulation and Phase 2 performance. In turn, performance was expected to mediate the influence of opportunities on self and coach evaluations.

RESULTS

To test the effect of our manipulation and the proposed mechanisms for its effects, we conducted three sets of mediation analyses. The first set examined the effect of our manipulation on performance (H1), mediated by number of opportunities (H2). The second set examined the effect of opportunities on self-confidence (H3), mediated by performance (H4). The third set examined the effect of opportunities on coach evaluations (H5), mediated by performance (H6). All analyses include baseline ability (gathered during Phase 1) to control for actual free-throw shooting ability. In virtually all analyses, baseline ability was a significant predictor ($p < .01$) and should be regarded as such unless noted otherwise.

Because players participated in teams, their data are not independent. Therefore, to address this clustering of players within teams, each of the following regression analyses was conducted twice: once in the traditional manner, and once using Huber-White cluster-robust standard errors (because these standard errors do not assume independence within teams, they return a different p value; Huber, 1967; White, 1980). The standard errors (traditional and cluster-robust) and corresponding p values can be found in Tables 1 and 2. The use of cluster-robust standard errors

TABLE 1
Traditional and Cluster-Robust Standard Errors (and Corresponding *p* Values) for All Regression Analyses

Predictors	*Dependent variable*	*Traditional* SE	*Traditional* p *value*	*Cluster-robust* SE	*Cluster-robust* p *value*	*Beta*
Manipulated expectation	Team opportunities	.181	.003	.194	.008	.288
Ability		.168	.004	.184	.012	.280
Manipulated expectation	Final percentage	.0037	.035	.004	.056	.177
Ability		.0034	<.001	.0033	<.001	.561
Team opportunities	Final percentage	.0018	<.001	.0017	<.001	.431
Manipulated expectation		.0034	.486	.0030	.440	.053
Ability		.0031	<.001	.0031	<.001	.441
Team opportunities	Self-rating	.0154	<.001	.0137	<.001	.428
Ability		.0273	<.001	.0319	<.001	.469
Team opportunities	Self-Rating	.0148	.017	.0152	.025	.177
Final percentage		.7588	<.001	.6469	<.001	.574
Ability		.0267	.007	.0257	.008	.204
Team opportunities	Coach rating	.0202	<.001	.0241	<.001	.494
Team opportunities	Coach rating	.2350	.016	.0214	.012	.256
Final percentage		1.0034	<.001	1.0530	.001	.399

TABLE 2
Results of All Sobel's Tests, Calculated Both With Traditional and Cluster-Robust Standard Errors

	Traditional z	*Traditional* p	z *with cluster-robust* SEs	*Cluster-robust* p
Sobel 1	2.65	.008	2.56	.010
Sobel 2	4.47	<.001	4.87	<.001
Sobel 3	2.46	.014	2.50	.012

had very little effect on the p values and did not alter the statistical significance of our analyses. As such, the following results report the analyses using traditional standard errors.

Finally, three of our hypotheses (H2, H4, and H6) rely on mediation. Three popular approaches to mediation currently dominate the literature, including Baron and Kenny's (1986) criteria, Sobel's (1982) inferential z test for the indirect effect, and more recently Preacher and Hayes' (2004) bootstrapping technique (see also Efron & Tibshirani, 1993). The bootstrapping technique yields a 95% confidence interval for the indirect effect, and if this interval does not include 0, the indirect effect is considered statistically significant (Preacher & Hayes, 2004). For our bootstrapping analyses we used Preacher and Hayes' SPSS macro, set to 5,000 iterations. Because different readers may be more familiar with one of these approaches to mediation than the others, we have included the necessary statistics to interpret mediation from all three approaches. In each of our analyses, the interpretation is identical across these three different approaches.

The first set of analyses examined the effect of the manipulated expectations that were assigned to the coach (H1 and H2). Manipulated expectations predicted the number of shots each player was given during the team shooting phase (team opportunities; $b = .288$, $p = .003$) and each player's shooting percentage during team shooting (final performance; $b = .177$, $p = .035$; H1). When manipulated expectations and team opportunities were used to predict final performances, manipulated expectations were no longer a significant predictor ($b = .0034$, $p = .49$), but team opportunities were ($b = .431$, $p < .001$). This result suggests that the relationship between manipulated expectations and final performances is mediated by team opportunities (H2), which is further supported by a Sobel test ($z = 2.65$, $p = .008$; Figure 1) and by the bootstrapping approach (95% CI [.018, .083]). That is, giving a coach an expectation about a player resulted in different opportunities to shoot, more for a positive expectation and fewer for a positive expectation, which then resulted in either better or worse performance.

The second set of analyses examined the influence of the team shooting phase on players' self-confidence (H3 and H4). The number of team opportunities predicted self-ratings, both alone ($b = .428$, $p < .001$; H3) and when run simultaneously with final performance as a predictor ($b = .177$, $p = .02$). Final performances also predicted self-ratings ($b = .574$, $p < .001$) when included with team opportunities. Thus, the number of team opportunities had both a direct and indirect effect on self-ratings, supported by both a Sobel test ($z = 3.68$, $p < .001$; Figure 2) and the bootstrapping approach (95% CI = .019 to .084) (H4). This result suggests that the relationship between opportunities and self-ratings is partially mediated by their actual performance. That is, giving a player either more or fewer opportunities to shoot resulted in either better or worse performance, which in turn led to either higher or lower self-ratings.

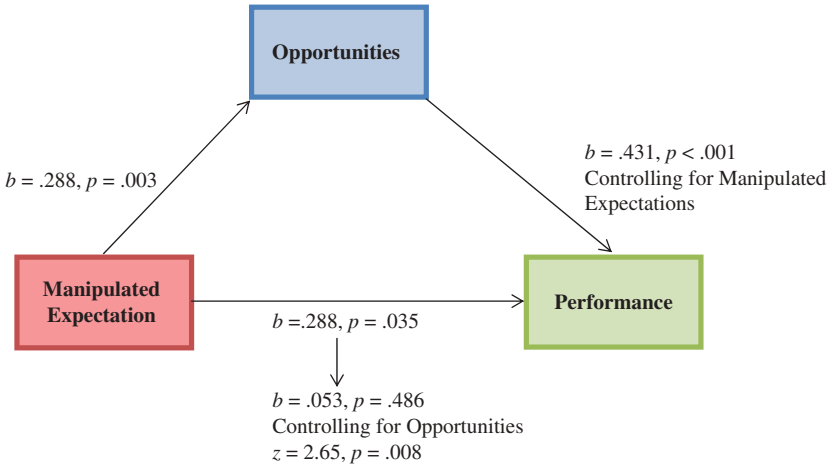

FIGURE 1 Indirect effect of manipulated expectations on performance.

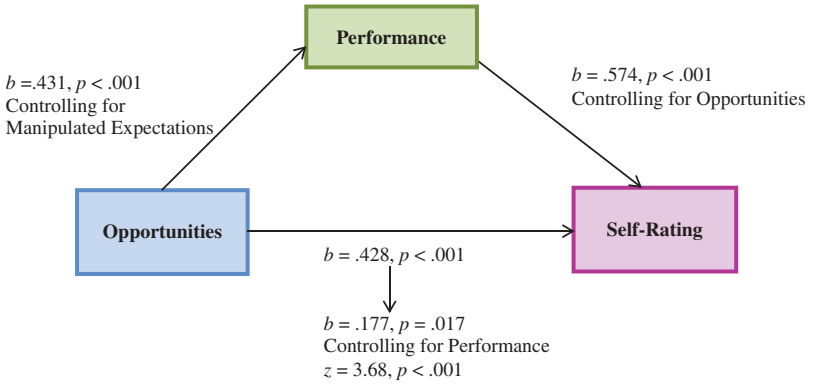

FIGURE 2 Indirect effect of opportunities on self-confidence.

The final set of analyses examined the influence of the team shooting phase on coaches' assessments of players' shooting ability (H5 and H6). Number of team opportunities predicted ratings of each player by the coach ("coach ratings"), both alone ($b = .494$, $p < .001$; H5) and when run simultaneously with final performance as a predictor ($b = .256$, $p = .02$). Final performances also predicted coach ratings ($b = .399$, $p < .001$) when included with team opportunities (H6). Thus, the number of team opportunities had a direct and indirect effect on coach ratings, supported by both a Sobel test ($z = 2.46$, $p = .01$; Figure 3) and the bootstrapping approach (95% CI [.010 to .062]). It should also be noted that this is the only analysis in which ability was not included as a predictor, because it had no significant effect when the other predictors were included in the model. Therefore, ability's effects on coach ratings were fully mediated by team opportunities and final performances. Thus, the coaches' expectations drove differential opportunities for players, which in turn affected the players' performance,

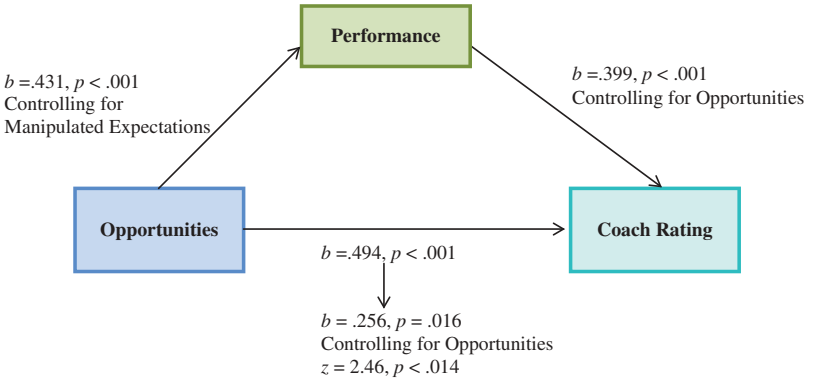

FIGURE 3 Indirect effect of opportunities on coach evaluations.

which then impacted how the coaches evaluated the players, independent of the players' actual ability.

DISCUSSION

In this experiment, we aimed to demonstrate the effects of ability-based expectations in a sport setting, and thereby extend the domain of applicability of the phenomenon and processes of the behavioral confirmation of expectations. We predicted that our manipulation of coach expectations would influence player performances (H1) through the number of opportunities that coaches gave each player (H2). Further, we predicted that this number of opportunities would predict self-confidence (H3) through player performances (H4). Finally, we predicted that the number of opportunities granted to each player would influence coach evaluations of that player (H5) through player performances (H6).

All six hypotheses received strong support, and the three hypotheses that relied on mediation analyses were supported across all three approaches to mediation (i.e., Baron & Kenny, 1986; Preacher & Hayes, 2004; Sobel, 1982). Coaches favored players with higher manipulated scores by giving them more opportunities. In turn, players who were given more opportunities shot more accurately (H1 and H2). Possibly, these players were simply given more practice, or had more chances to "get in a rhythm." Alternatively, players who were given more opportunities may have sensed that their coach was favoring them, and they may have gained confidence in their shooting ability. In contrast, players who were given fewer opportunities may have felt inferior and consequently performed poorly. Indeed, the number of shots given predicted self-confidence, both directly and through shooting percentage (H3 and H4).

Interestingly, the data suggested the number of shots given to each player predicted self-confidence beyond the indirect relationship through shooting percentage. Although this finding was not hypothesized a priori, it certainly has implications for the expectation cycle. Not only does the number of opportunities an athlete receives influence their performance, it also influences their own self-confidence. Perhaps players see their opportunities as a measure of the coach's

assessment of their abilities. If this is the case, players might account for their coach's opinions when they evaluate their own abilities.

Not only did this investigation find support for behavioral confirmation of the coaches' expectations, but perceptual confirmation also played a role. The way that coaches allocated shots influenced player performances, which then influenced coaches' evaluations of their players. This finding is suggestive of the cyclical nature of behavioral confirmation. Even after coaches had the opportunity to observe the players in action, their impressions were still largely (if indirectly) influenced by the manipulated expectations. In the real world, these coaches would continue to act on their expectations, and continue to observe confirming evidence in the behavior of the targets. The targets would continue to be influenced by coach expectations, and eventually their own self-assessments may come to mirror the evaluations of the coach.

One potentially integrative framework for understanding the mechanisms of the self-fulfilling prophecies observed in this study is provided by Darley and Fazio's (1980) six-stage model. In Stage 1, perceivers use available information to develop expectations of targets. In our study, we provided coaches (the perceivers in this study) with false information to form these expectations. In Stage 2, expectations influence the manner in which perceivers treat targets. In our study, the coaches used their (false) expectations to allocate more shots to players (the targets in this study) they believed were better. In Stage 3, perceivers notice and interpret their own behaviors. In our study, the coaches used their allocations to determine their later evaluations of players. In Stage 4, targets respond to perceivers' behavior in a manner that is consistent with the perceiver's original expectation, represented in our study by the positive relation between the manipulated expectations and player performances. In Stage 5, perceivers interpret targets' responses, which is the critical measure for perceptual confirmation. In our study, coaches used player performances to influence their subsequent evaluations of players. Finally, in Stage 6 targets interpret their own behavior, which our players did by using their recent performance to determine their confidence.

Of particular relevance to the cyclical nature of self-fulfilling prophecies are the fifth and sixth stages of the model. Specifically, the fifth stage feeds back into the first stage of the model by providing the perceiver with more information on which to base expectations. Similarly, the sixth stage may influence targets' future behavior through their self-perceptions (Bem, 1972), whereby targets may use their past confirming behavior as relevant information when evaluating themselves. This cyclical model, which appears to be strongly supported by our data, suggests that our effects would have been even greater if the experimental session had lasted longer than an hour. Actual athletes spend several hours every day working with their teams and coaches, allowing for countless repetitions through the expectation cycle.

The results of this study converge with and complement previous examinations of expectations in diverse interpersonal relationship contexts. Furthermore, these results support a causal relationship between coach expectations and player performances in a sport context. Demonstrating this causal relationship in an athletic domain extends experimental research to a new context, thereby contributing to the scientifically important goal of adding support for the generality of expectation effects across diverse domains in which interactions occur in the context of expectations.

In closing, we note that, in our investigation, the coaches' expectations of their players were based on false claims made by the experimenter. But in real life, ability expectations may be based on a wide variety of factors in addition to the claims made by others who purport to know something about performance, factors such as stereotypes about race, sex, class, or

physical characteristics. Although expectations about ability are often accurate, they very often may be inaccurate when based on such sources, and our research demonstrates that even false expectations can have a profound impact on shaping the reality of actual performance.

AUTHOR NOTES

Jason Weaver, PhD, is a Visiting Assistant Professor at Colorado College. His research interests include identity, threat, physical activity, and sexual orientation. **Jennifer Filson Moses**, PhD, is an Assistant Professor of Psychology and Statistics at Pierce College with broad research interests in pro-social behavior, close relationships, and social identity. **Mark Snyder**, PhD, holds the McKnight Presidential Chair in Psychology and is Director of the Center for the Study of the Individual and Society at the University of Minnesota. His research addresses the motivational foundations of individual and social behavior.

ORCID

Jason Weaver http://orcid.org/0000-0001-7692-227X

REFERENCES

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality & Social Psychology*, *51*, 1173–1182. doi:10.1037/0022-3514.51.6.1173

Bem, D. (1972). Self perception theory. In L. Berkewitz (Ed.), *Advances in experimental social psychology* (Vol. 6, pp. 1–62). New York, NY: Academic Press.

Darley, J. M., & Fazio, R. H. (1980). Expectancy confirmation processes arising in the social interaction sequence. *American Psychologist*, *35*, 867–881. doi:10.1037/0003-066X.35.10.867

Downey, G., Freitas, A. L., Michaelis, B., & Khouri, H. (1998). The self-fulfilling prophecy in close relationships: Rejection sensitivity and rejection by romantic partners. *Journal of Personality and Social Psychology*, *75*, 545–560. doi:10.1037/0022-3514.75.2.545

Duda, J. L. (1989). Relationship between task and ego orientation and the perceived purpose of sport among high school athletes. *Journal of Sport and Exercise Psychology*, *11*, 318–335.

Efron, B., & Tibshirani, R. J. (1993). *An introduction to the Bootstrap*. Boca Raton, FL: Chapman & Hall/CRC.

Gibbons, F. X., & Buunk, B. P. (1999). Individual differences in social comparison: Development of a scale of social comparison orientation. *Journal of Personality and Social Psychology*, *76*, 129–142. doi:10.1037/0022-3514.76.1.129

Horn, T. S., Lox, C. L., & Labrador, F. (2001). The self-fulfilling prophecy theory: When coaches' expectations become reality. In J. M. Williams (Ed.), *Applied sport psychology: Personal growth to peak performance* (4th ed., pp. 63–81). Palo Alto, CA: Mayfield.

Huber, P. J. (1967). The behavior of maximum likelihood estimates under nonstandard conditions. *Proceedings of the Fifth Berkeley Symposium on Mathematical Statistics and Probability*, *1*, 223–233.

Kierein, N. M., & Gold, M. A. (2000). Pygmalion in work organizations: A meta-analysis. *Journal of Organizational Behavior*, *21*, 913–928.

Leary, M. (1983). A brief version of the fear of negative evaluation scale. *Personality and Social Psychology Bulletin*, *9*, 371–375. doi:10.1177/0146167283093007

McNatt, D. B. (2000). Ancient Pygmalion joins contemporary management: A meta-analysis of the result. *Journal of Applied Psychology*, *85*, 314–322. doi:10.1037/0021-9010.85.2.314

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, *36*, 717–731. doi:10.3758/BF03206553

Rejeski, W., Darracott, C., & Hutslar, S. (1979). Pygmalion in youth sport: A field study. *Journal of Sport Psychology*, *1*, 311–319.

Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom*. New York, NY: Holt, Rinehart, & Winston.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, *80*, 1–28. doi:10.1037/h0092976

Snyder, M., & Gangestad, S. W. (1986). On the nature of self-monitoring: Matters of assessment, matters of validity. *Journal of Personality and Social Psychology*, *51*, 125–139. doi:10.1037/0022-3514.51.1.125

Snyder, M., & Stukas, A. (1999). Interpersonal processes: The interplay of cognitive, motivational, and behavioral activities in social interaction. *Annual Review of Psychology*, *50*, 273–303. doi:10.1146/annurev.psych.50.1.273

Snyder, M., & Swann, W. B. (1978). Hypothesis-testing processes in social interaction. *Journal of Personality and Social Psychology*, *36*, 1202–1212. doi:10.1037/0022-3514.36.11.1202

Snyder, M., Tanke, E. D., & Berscheid, E. (1977). Social perception and interpersonal behavior: On the self-fulfilling nature of social stereotypes. *Journal of Personality and Social Psychology*, *35*, 656–666. doi:10.1037/0022-3514.35.9.656

Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological Methodology*, *13*, 290–312. doi:10.2307/270723

Solomon, G., Goldern, A., Ciapponi, T., & Martin, A. (1998). Coach expectations and differential feedback: Perceptual flexibility revisited. *Journal of Sport Behavior*, *21*, 298–310.

Solomon, G., & Kosmitzki, C. (1996). Perceptual flexibility and differential feedback among intercollegiate basketball coaches. *Journal of Sport Behavior*, *19*, 163–177.

White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica*, *48*, 817–830. doi:10.2307/1912934

Wilson, M. A., & Stephens, D. E. (2007). Great expectations: An examination of the differences between high and low expectancy athletes' perception of coach treatment. *Journal of Sport Behavior*, *30*, 358–373.

Received November 14, 2014
Accepted July 14, 2015