Research Report

Faking the Desire to Learn

A Clarification of the Link Between Mastery Goals and Academic Achievement

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ABSTRACT—Research on achievement goals has demonstrated that mastery goals positively impact achievement-related outcomes, but paradoxically hold an inconsistent relation with academic achievement. We hypothesized that this relationship depends on the reason why students endorse mastery goals—namely, to garner teachers' appreciation (social desirability) or to succeed at university (social utility). First-year psychology students completed a mastery-goal scale in a standard format, with social-desirability instructions and social-utility instructions. Participants' grades on academic exams were recorded later in the semester. Results indicated that students' perceptions of both social desirability and social utility related to mastery goals moderated the relationship between the endorsement of mastery goals and final grades. This relationship was reduced by the increase of perceived social desirability of mastery goals, and strengthened by the increase of perceived social utility of these goals.

How is it possible that students driven by the desire to learn do not necessarily perform well on exams? This question may seem contrary to common sense, but a conspicuous amount of research has already identified the counterintuitive inconsistency in the correlation between desire to learn and academic performance (e.g., Harackiewicz, Durik, Barron, Linnenbrink-Garcia, & Tauer, 2008). We propose that students' desire to learn relates to academic achievement to the extent that students do not perceive the expression of this desire as an instrument to be appreciated by their teachers.

Over the last 20 years, there has been tremendous development in achievement-motivation research, particularly through the contribution of achievement-goal theory (Brophy, 2005;

Elliot & Thrash, 2001; Pintrich, 2003; Urdan, 1997). Achievement goals are defined as the "purpose of achievement behavior" (Ames, 1992, p. 261) and are associated with specific affective, cognitive, and behavioral patterns (Dweck & Legget, 1988). Research in this domain has proposed distinguishing two primary classes of achievement goals (Dweck, 1992; Nicholls, 1984). Mastery goals correspond to the desire to learn—namely, to improve competence through the acquisition of new knowledge and skills; performance goals correspond to the desire to demonstrate competence compared to others.[1] Mastery goals are considered to have more positive consequences on achievement-related outcomes than performance goals (e.g., deep processing, effort, intrinsic motivation; Barron & Harackiewicz, 2000; Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002; Urdan, 2004).

However, research has not clearly demonstrated that the endorsement of mastery goals leads to academic success. Indeed, most studies report that mastery goals did not significantly predict students' grades. Although theoretically and practically important, explanations for such an inconsistency are rare (e.g., Elliot & Church, 1997; Elliot & McGregor, 2001; Harackiewicz et al., 2002; for a recent review, see Linnenbrink-Garcia, Tyson, & Patall, 2008). Moreover, an a priori moderator of the link between mastery goals and academic achievement has never been proposed.

We argue that there are different reasons for endorsing mastery goals and that these reasons should moderate the link between mastery goals and achievement. Indeed, one might strongly endorse mastery goals because one believes in their

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[1]Recent developments in achievement goal theory aim to distinguish achievement goals according to their approach/avoidance tendencies (Elliot & McGregor, 2001). Because we focused on mastery goals, we do not discuss performance goals. Mastery-approach goals imply the desire to improve self-competence; mastery-avoidance goals imply the desire to avoid self-incompetence. Because mastery-avoidance goals are not expected to be related to academic achievement (e.g., Elliot & Murayama, 2008), they are irrelevant in the present context. Consequently, we use the generic term *mastery goals* to refer to mastery-approach goals, as is common in the literature (cf. Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002).

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utility in a given educational context; in this case, mastery goals should be positively linked to achievement. However, one might also strongly endorse mastery goals in order to create a positive image of oneself to teachers; in this case, mastery goals should not predict academic achievement.

SOCIAL VALUE OF MASTERY-GOAL ENDORSEMENT AT UNIVERSITY

Darnon, Dompnier, Delmas, Pulfrey, and Butera (2009) recently demonstrated that mastery goals are highly valued at university. This research shows that university teachers greatly encourage students to endorse mastery goals in their courses and that students who do so are judged positively in terms of both social desirability (e.g., nice, warm) and social utility (e.g., smart, competent)—that is, on the two fundamental dimensions of social perception. Researchers have used different labels for these dimensions: warmth and competence (Fiske, Cuddy, & Glick, 2007; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005), morality and competence (Wojciszke, 2005), or social desirability and social utility (Beauvois, 2003; Dubois & Beauvois, 2005). Darnon et al. (2009) adopted the latter framework and observed, in their Study 2, that students endorsing mastery goals were perceived as nice (high social desirability) and as having a high probability of university success (high social utility). University teachers' appreciation of mastery goals is not surprising; however, the belief that teachers perceive students who follow their recommendations about endorsing mastery goals as nice and diligent might paradoxically encourage students to report mastery goals as a self-presentation strategy. Indeed, Darnon et al. (2009, Study 1) demonstrated that students clearly know that, to please teachers, they should report a high level of mastery-goal endorsement.

We used these results to address the link between mastery goals and academic achievement. We argue that the students' perception of the social value of mastery goals could explain the inconsistencies found in the positive link between the endorsement of mastery goals and academic achievement. Indeed, when students respond to an achievement-goal scale, they may endorse mastery goals for at least two nonexclusive purposes: to pursue mastery goals, as supposed by achievement-goal researchers, and to be perceived as a "nice person" by teachers. Thus, the lower students' perception of mastery goals as a means for gaining teachers' appreciation, the more sincere their reported goal endorsement will be. This line of reasoning led to our first hypothesis: The lower students' perception of mastery goals' social desirability, the greater the relationship between endorsement of mastery goals and academic achievement. We also predict that the relationship between endorsement of mastery goals and academic achievement increases with the increase of the students' perception of mastery goals' social utility.

METHOD

Participants
This study involved 267 French psychology first-year students. Two participants were excluded from the analyses due to uncommon deleted studentized residuals (Judd & McClelland, 1989). The final sample comprised 231 women and 32 men (2 participants did not report their sex) with a mean age of 19.20 ($SD = 1.76$).

Materials and Procedure
Data were collected during a year-long regular social psychology class. Participants' grades were taken during the first semester of the academic year; these initial grades served as a control for students' individual differences in initial achievement level. At the beginning of the second semester, each participant rated the extent to which their aim in that class was "to learn as much as possible," "to understand what is taught," and "to master what is taught." Participants provided ratings on a 7-point scale (1 = *not at all true for me*; 7 = *very true for me*). These items corresponded to the mastery-approach subscale of Elliot and McGregor's (2001) achievement-goal scale (French version by Darnon & Butera, 2005).

Participants responded to these items three times—first in a standard version and then according to two within-participants conditions (social desirability and social utility). In the standard condition, participants simply indicated their level of agreement with each item ($\alpha = .89$). In the social-desirability condition, participants were asked to respond to the items as if they possessed all the qualities to make themselves popular with their teachers: "Indicate your level of agreement with each of the following statements, with a view to presenting yourself as someone who is likely to be appreciated by your teachers" ($\alpha = .91$). In the social-utility condition, they were asked to respond to items as if they possessed all the qualities to succeed at university: "Indicate your level of agreement with each of the following statements, with a view to presenting yourself as someone who is likely to succeed in his or her studies" ($\alpha = .88$; see Darnon et al., 2009, for similar instructions). The standard version was always presented in the first position in the questionnaire to obtain an uncontaminated measure of students' a priori endorsement of mastery goals; the positions of the social-desirability and social-utility conditions were counterbalanced across participants.

Finally, participants' grades were recorded again during the second semester (final grades); this grade constituted the dependent variable. Initial and final performance variables ranged from 0 to 20, the standard grading scale in France. Students' performance was assessed using three exams, including five open-ended questions on course content, per semester. The teacher, who was unaware of the participants' responses to the goal questionnaire, graded these questions. Initial and final

grades consisted of the mean of the three graded exams in the corresponding semester.

RESULTS

Means, standard deviations, and correlations for the various measures are given in Table 1. A regression model was used to test the hypotheses. The regression model included students' initial grade, a priori endorsement of mastery goals, goal endorsements in the social-desirability and social-utility conditions, and interaction products among these variables as predictors. All predictors were centered. The dependent variable (final grade) was regressed on the 15 terms of the model. Sex and age had no main effects or interactions with other variables in preliminary analyses and were not examined further.

The regression analysis revealed a main effect of the participants' initial grade, $b = 0.66$, $F(1, 249) = 134.05$, $p < .001$, $p_{rep} = .99$, proportional reduction in error (PRE) $= .33$. Higher grades at the end of the first semester were positively correlated with higher grades at the end of the second semester. Because initial grades were only included to control for initial individual differences in performances, the interactions involving this covariate are not discussed. Although zero-order correlations indicated a positive and significant relationship between a priori endorsement of mastery goals and performance (cf. Table 1), the main effect of participants' a priori endorsement of mastery goals was not significant in the complete model, $b = 0.18$, $F(1, 249) = 1.14$, $p > .28$, $p_{rep} = .77$, $PRE < .01$. However, the regression model indicated a significant interaction between participants' a priori endorsement of mastery goals and the perception of these goals' social desirability, $b = -0.32$, $F(1, 249) = 6.02$, $p < .05$, $p_{rep} = .96$, $PRE = .02$; this finding supports our first hypothesis. As Figure 1 indicates, as participants' perception of mastery goals' social desirability decreased, the relationship between a priori endorsement of mastery goals and final grade increased.

The regression analysis also indicated a significant interaction between participants' a priori endorsement of mastery goals and the perception of these goals' social utility, as predicted by

our second hypothesis, $b = 0.55$, $F(1, 249) = 3.99$, $p < .05$, $p_{rep} = .92$, $PRE = .01$. Figure 2 illustrates that as participants' perception of mastery goals' social utility increased, the relationship between a priori endorsement of mastery goals and grades also increased. No other main effect or interaction reached significance, all $Fs(1, 249) < 2.38$, $ps > .12$, $p_{rep}s < .86$, $PREs < .01$.

DISCUSSION

We tested two hypotheses suggesting that the relationship between mastery goals and achievement depends on students' perception of the social value attached to these goals. Previous research has repeatedly reported an inconsistency in this relationship without offering a definite explanation. However, much of this research examined mastery goals as the genuine expression of a disposition instead of a potential communication tool embedded in social relations. Indeed, several authors have asserted that achievement goal research often overlooks social interaction contexts in which these goals are expressed (Darnon, Butera, & Harackiewicz, 2007; Kaplan, 2004). Thus, the previously mentioned inconsistencies might stem from the fact that the traditional measure of mastery goals confounds students' concerns for social desirability and social utility.

Our results support this idea by demonstrating that students' perceptions of the social desirability and social utility of mastery goals moderated the relationship between mastery goals and achievement. The first interaction effect indicated that the lower students' perception of mastery goals as socially desirable, the more their endorsement of mastery goals predicted their final grades. Conversely, the second interaction effect indicated that the higher students' perception of mastery goals as socially useful, the stronger the relationship between endorsement of mastery goals and final grades. These results reveal that the link between mastery goals and academic achievement is conditioned by an inhibiting factor and a facilitating factor. The inhibiting factor is the perception that mastery goals are social goals that can be used for self-presentation purposes.

TABLE 1

Mean Values of the Variables and Their Intercorrelations

| Variable	Mean	A priori endorsement of mastery goals	Social desirability of mastery goals	Social utility of mastery goals	Initial grade	Final grade
		Correlation				
A priori endorsement of mastery goals	5.53 (1.18)	—				
Social desirability of mastery goals	5.95 (1.17)	.34**	—			
Social utility of mastery goals	6.60 (0.66)	.26**	.44**	—		
Initial grade	11.83 (3.67)	.10	.00	.00	—	
Final grade	11.28 (3.68)	.22**	.14*	.03	.66**	—

Note. Standard deviations are given in parentheses.
*$p < .05$. **$p < .01$.
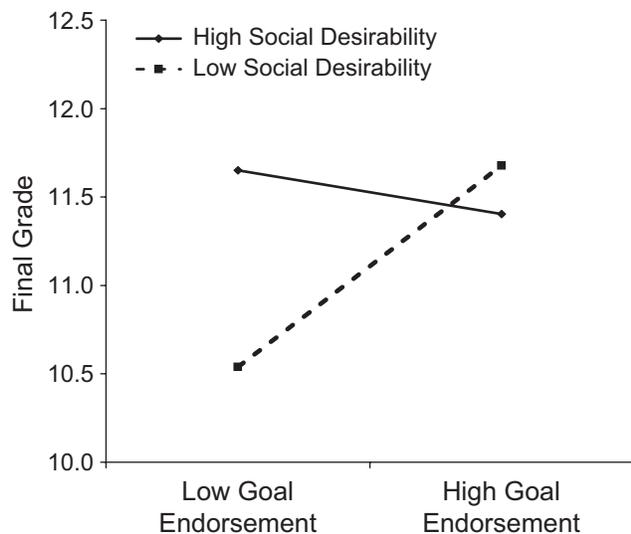
Fig. 1. Relationship between students' final grade (range = 0–20) and their level of endorsement of mastery goals. Simple slopes are shown separately for students who perceived mastery goals as having high and low social desirability.

Fig. 2. Relationship between students' final grade (range = 0–20) and their level of endorsement of mastery goals. Simple slopes are shown separately for students who perceived mastery goals as having high and low social utility.

If students understand the positive influence that the expression of mastery goals may have on teachers, they might express mastery goals simply so that they will be perceived as nice students, not to actually learn. This might explain an interesting finding reported by Linnenbrink-Garcia et al. (2008), who analyzed 90 studies and found that the proportion of studies showing a positive link between mastery goals and performance decreases steadily from elementary school to college. Perhaps advancing through the educational system brings about understanding of the social desirability of these goals (Bigot, Pichot, & Testé, 2004; Darnon et al., 2009). The facilitating factor is the perception that mastery goals lead to success at university. Whatever the motivational dynamics underlying this factor (from intrinsic motives such as task mastery to more extrinsic motives such as getting good grades), future research should demonstrate that perceptions of mastery goals' social utility facilitate the link between mastery goals and academic achievement because such perceptions lead students to use effective study strategies, such as deep study (Nolen, 1988). Our research, however, is the first to demonstrate that this link can be facilitated.

Thus, the relationship between mastery goals and academic achievement depends on the social value students attribute to mastery goals—namely, to social desirability and social utility. Our conclusions are strengthened by the fact that participants were real students completing a real course, which offers a high level of ecological validity. The present results indicate that teachers should continue to promote mastery goals, but be aware that the students' endorsement of these goals may be tinted by concerns about social desirability. These results also indicate that researchers should look at mastery goals not only as genuine dispositional achievement goals, but also as situated social goals
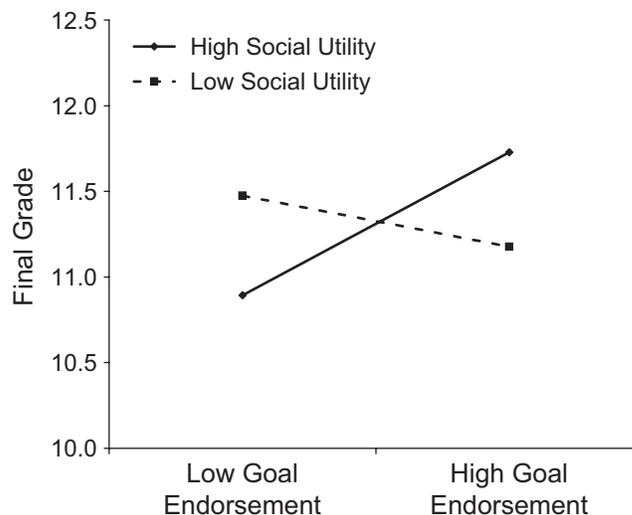
(Smith & Semin, 2007). Future research should reframe achievement goal theory within a more socially oriented approach to achievement motivation.

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