

Effects of Person versus Process Praise on Motivation in Emerging Adulthood

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Introduction

Praise is a powerful and commonly used tool to reinforce positive behavior and motivate students, but a growing body of research challenges the purely beneficial effects of praising students for success (Henderlong & Lepper, 2002).

In children, praising the process of a task (e.g., effort, strategy) leads to positive motivational outcomes such as controllable performance attributions, mastery orientation, and enjoyment. Praising the person (e.g., ability, intelligence) can promote negative outcomes after subsequent setbacks, such as uncontrollable attributions, helpless coping and contingent self-worth (Corpus & Lepper, 2007; Kamins & Dweck, 1999).

These results have not been replicated with adults, but the one study using college students found that ability praise enhanced motivation more than effort praise after success (Koestner, Zuckerman, & Koestner, 1987). It may be that college students react more positively to ability praise than do children due to developmental changes or more time in a performance-oriented environment (e.g., Barker & Graham, 1987; Deci, Ryan, & Koestner, 1999). Yet these mixed results may be caused by artifacts between studies of children and adults.

Current Study: We sought to clarify incongruent findings by examining how college students react to person and process praise relative to no praise before and after experiencing subsequent failure.

Moreover, most motivation work assumes college students are a stable group, but developmentalists classify ages 18-25 as *emerging adulthood*, a period of development distinct from adolescence and adulthood (Arnett, 2000). In this time, mastery goals decrease (Leiberman & Remedios, 2007) while self-esteem increases (Galambos, Barker, & Krahn, 2006). Thus, we explored the possibility that undergraduates' motivational reactions to praise would change during college.

Method

Participants: 111 undergraduates (60 males).

Procedure: Participants worked on 3 puzzles total, receiving high scores on the first two followed by either person praise or process praise (see below). Participants in the control condition received only the numeric feedback.

Person praise: "Great! You're really good at these!" after the first puzzle; "Excellent! You must have a natural talent." after the second.

Process praise: "Great! It seems like you put a lot of effort into these"; "Excellent! You must be using some really effective strategies."

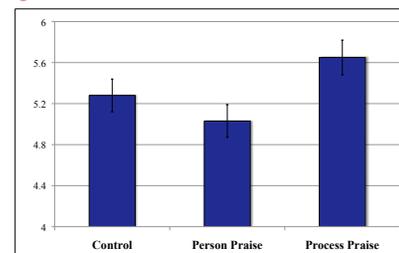
On the third puzzle, participants received a score lower than average and were told "You didn't do as well on this last one."

Participants then completed a questionnaire assessing intrinsic motivation, perceived competence, contingent self-worth, and performance attributions.

Results

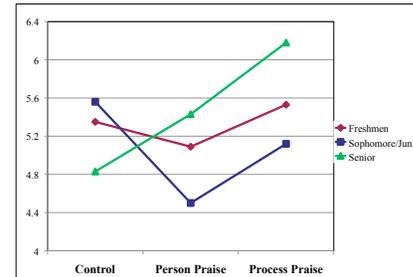
As expected, there were no differences in reactions to person or process praise before the failure feedback. After the setback trial, students reported more intrinsic motivation after process praise than after person praise, with the control condition in between, $F(2, 96) = 3.31, p < .05, \eta_p^2 = .07$. (Fig. 1). The next step was to test whether this main effect differed for students at different stages of their college careers.

Figure 1. Effects of Praise on Intrinsic Motivation



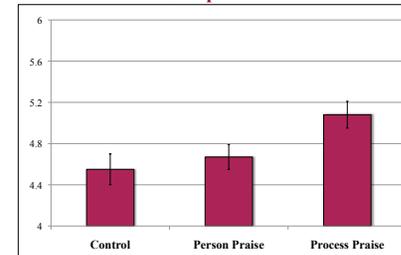
Indeed, seniors increased in self-reported intrinsic motivation most after process praise while sophomores and juniors reacted most negatively to person praise, $F(4, 96) = 3.53, p < .01, \eta_p^2 = .14$. (Fig. 2).

Figure 2. Effects of Praise and Year in School on Intrinsic Motivation



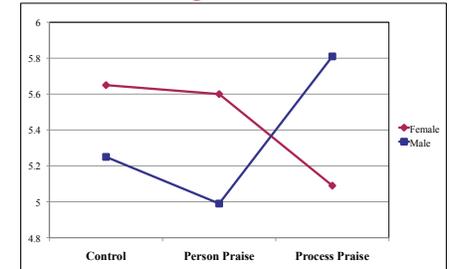
Students reported more perceived competence after receiving process praise than after receiving no praise, with person praise falling in between, $F(2, 95) = 4.43, p < .05, \eta_p^2 = .09$. (Fig. 3). A trend similar to that of intrinsic motivation (see Fig. 2) was observed for perceived competence across years, $F(4, 95) = 2.19, p = .08, \eta_p^2 = .09$.

Figure 3. Effects of Praise on Perceived Competence



While there was no main effect of praise on contingent self-worth, process praise decreased feelings of contingent self-worth for women while men showed the opposite pattern, $F(2, 96) = 5.79, p < .005, \eta_p^2 = .11$. (Fig. 4).

Figure 4. Effects of Praise and Gender on Contingent Self-Worth



Conclusions

The current study extends findings with children to show that undergraduates are more motivated by process praise than person praise when later faced with failure. As praise is used repeatedly in classroom settings, its effects are likely to accumulate over time. Consequently, understanding the counterintuitive effects of these commonly used motivators is crucial for fostering productive learning environments at all stages of development.

This study also found that students' reactions to praise change as they progress through college. Future research should consider the mechanisms by which these changes occur and the implications of motivational development across these years.

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Effects of Praise on Motivation in Emerging Adulthood

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Abstract

This study examined the effects of person praise and process praise on college students' motivation and how these effects change as students progress through their undergraduate years. 111 college students worked on three puzzle tasks and received either person praise, process praise, or no praise. Following subsequent failure, intrinsic motivation, perceived competence, performance attributions, and contingent self-worth were assessed. Results indicate that process praise enhances intrinsic motivation and perceived competence more than person praise, and that these effects vary as students advance toward their degree. While person praise was especially harmful to sophomores and juniors, process praise was particularly beneficial for seniors, and freshmen reported no significant differences in their motivation. For women, process praise decreased contingent self-worth.

Theoretical Framework and Objectives

Conventional wisdom suggests that praise is a powerful tool used to reinforce good behavior and motivate students, but a growing body of research challenges the purely beneficial effects of praising a student for success (Brophy, 1981; Deci, Ryan, & Koestner, 1999; Henderlong & Lepper, 2002). Research with children demonstrates that changing the attributional focus of a praise statement may have unintended consequences for children's motivation and task enjoyment (Corpus & Lepper, 2007; Mueller & Dweck, 1998). Indeed, praising a child for outstanding ability may lead that child to attribute her success to internal, stable, and unchangeable causes. While not problematic under conditions of success, once this child encounters challenging obstacles, she will still hold those internal, stable attributions. A child praised for hard work, on the other hand, will be more likely to see her success as a result of effort, a controllable cause, and will later continue to try harder when performance setbacks eventually do arise (Mueller & Dweck, 1998).

Experimental evidence with children supports this theoretical framework, demonstrating that when praise focuses on the whole *person*, such as ability or other stable dispositions (e.g., "You're a good boy"), children's sense of worth becomes increasingly contingent on external measures of success, they adopt helpless coping strategies during later challenges, and enjoy the task less. Conversely, praising the *process* that leads to success -- such as strategies or effort (e.g., "You must be concentrating") -- fosters a more adaptive mastery orientation and continued task enjoyment when later failure occurs (Corpus & Lepper, 2007; Kamins & Dweck, 1999). However, no research has yet replicated these findings with an adult population. Interestingly, one similar study with college students found an opposite pattern of results. Namely, students praised for their ability on a set of puzzle tasks increased performance and spent more time on

subsequent puzzles during a later free choice period than those who received effort praise or no praise (Koestner, Zuckerman, & Koestner, 1987). It may be the case that college students react more positively than children to ability praise over effort praise due to more time spent in a performance-oriented learning environment (Deci, Ryan, & Koestner, 1999) or due to increasing beliefs of an inverse relationship between effort and ability that develops in adolescence (Barker & Graham, 1987; Meyer, Bachmann, Biermann, Hempelmann, Ploger, & Spiller, 1979). However, the seemingly incongruent results between college students (Koestner et al., 1987) and children (e.g., Corpus & Lepper, 2007) may be artifactual. That is, Koestner et al. failed to include a failure phase in which students' performance drops -- an inevitable occurrence in the real world that is likely to reveal negative effects of ability attributions and positive effects of effort attributions for college students and children alike. The current study aimed to elucidate these ambiguities with an experimental design that evaluated the effects of receiving person and process praise relative to no praise on college student motivation before and after experiencing subsequent failure.

Finally, most motivation research assumes college students are a stable group representative of the adult population, but developmentalists have recently categorized the ages from 18 to 25 as a unique period of *emerging adulthood* that is conceptually and empirically distinct from both adolescence and young adulthood (Arnett, 2000; Arnett & Tanner, 2006). Given that college students are advancing through a novel and challenging learning environment during such an important period of transition, it is crucial to consider their changing motivational processes. Thus, the current study explored how the effects of praise on motivation may be moderated by college students' progression toward their degrees: Would person and process praise impact motivation in the same way for freshmen and seniors alike? Because of documented change during emerging adulthood in self-esteem, mastery goal orientation, and expected enjoyment of courses (Fryer & Elliot, 2007; Galambos, Barker, & Krahn, 2006; Leiberman & Remedios, 2007), there is reason to believe that college students' reactions to external feedback may shift as they progress through these transitory years.

Methods

This study used a 3 (class year: freshmen, sophomores/juniors, seniors) x 3 (feedback: person praise, process praise, no praise) between-subjects cross-sectional design. Dependent measures included self-reported and behavioral intrinsic motivation, perceived competence, contingent self-worth, and performance attributions.

Participants

Participants were 111 undergraduates (51 females, 60 males) recruited from a small liberal arts college.

Procedure

Participants were told that the study was examining how music affects task performance to mask the true purpose of the study. They worked on a series of hidden figures puzzles while listening to a corresponding song, and were given written performance feedback after each puzzle, followed by a short questionnaire about the music to maintain the cover story. The first two puzzles simulated a success phase followed by person praise, process praise, or no praise according to randomly assigned condition. All participants were given scores that indicted they

had been successful. The control group received only the numerical information while people in the praise conditions were given the following written feedback:

Process praise: “Great! It seems like you put a lot of effort into these!”; “Excellent! You must be using some really effective strategies!”

Person praise: “Great! You’re really good at these!”; “Excellent! You must have a natural talent!”

The third puzzle was a failure induction in which participants were told that they scored less than average and were given no praise. A longer questionnaire assessing intrinsic motivation, perceived competence, contingent self-worth, and performance attributions followed the last trial. Participants were asked if they would like to take home any extra puzzles after the experiment was over or have their own scored puzzles returned with answers – a measure of behavioral intrinsic motivation. At the end of the procedure, participants were asked to repeat the feedback that they received after each puzzle to ensure that they had read and remembered the praise given. They were then fully debriefed and thanked.

Measures

Participants used a 7-point scale for responding to all items.

Self-reported intrinsic motivation. Self-reported intrinsic motivation was measured using six items from the task interest and enjoyment subscale of the Intrinsic Motivation Inventory (IMI; Plant & Ryan, 1985; Ryan, 1982), $\alpha = .84$.

Perceived competence. Three items from the IMI (Ryan, 1982) assessed perceived competence (e.g., “I am satisfied with my performance at this task”), $\alpha = .64$.

Contingent self-worth. Contingent self-worth was measured using the five-item academic competence subscale of the Contingencies of Self-Worth Scale from Crocker, Luhtanen, Cooper, and Bouvrette (2003; e.g., “I feel better about myself when I know I’m doing well”) $\alpha = .75$.

Performance attributions. Performance attributions were recorded with a self-report measure adopted from Koestner, Zuckerman, and Olsson (1990). Participants rated the extent to which a number of factors (ability, task difficulty, music, effort, intelligence, and strategy) helped or hindered their performance and to what extent it did so.

Results and Discussion

Preliminary Analyses

Responses to the suspicion check revealed that the majority of participants (86%) had no suspicions that suggested understanding of the true nature of the study. Those who did hold correct suspicions ($n = 15$) were excluded from further analyses. A series of 3 x 3 (feedback condition x music order) analyses of variance (ANOVAs) confirmed that the ordering of music had no significant effects on any dependent variables (all $F_s < 1.9$, *ns*). A series of 2 x 3 (gender x feedback condition) ANOVAs found no effects of gender on any dependent variables, except when reported otherwise.

Preliminary analyses revealed sophomores and juniors reacted similarly to praise while freshmen and seniors formed distinct groups, so all subsequent analyses present sophomores and juniors grouped together. For the questions of central interest, then, a series of 3 x 3 (feedback condition x class group) ANOVAs were conducted to examine the effects of praise on

participants' responses to measures of intrinsic motivation, perceived competence, contingent self-worth, and performance attributions.

Intrinsic motivation

As expected, there were no effects of praise condition on enjoyment of the first two puzzles before the failure phase. Following the third more difficult puzzle, there was a predicted main effect of feedback condition on the composite measure of self-reported intrinsic motivation, $F(2, 96) = 3.31, p < .05$. Students who received process praise reported more intrinsic motivation than those who received person praise, with participants in the control condition falling in the middle. This main effect was qualified by a significant interaction between feedback condition and year in school, $F(4, 96) = 3.53, p < .01$. While person praise seemed to be less motivating than process praise at each grade level, the extent to which students were motivated by either type of praise depended on their year in school. For freshmen, intrinsic motivation was largely unaffected by the type of feedback they received, while sophomores and juniors reported significantly greater intrinsic motivation after receiving no praise or process praise compared to receiving person praise. Seniors reported greater intrinsic motivation after process praise than after person praise or no praise. See Table 1, Figure 1.

There were no main effects of praise on behavioral motivation, $F(2, 96) = .04, ns$, although there was a marginally significant interaction between condition and gender, $F(2, 96) = 2.34, p < .10$, suggesting that females demonstrated more behavioral intrinsic motivation ($M = .53, SD = .44$) than males ($M = .20, SD = .32$) after receiving process praise.

Perceived competence

There was a main effect of feedback condition on perceived competence, $F(2, 95) = 4.43, p < .05$. Students perceived their competence on the puzzles to be higher in the process praise condition than in the control condition while the perceived competence of those who received person praise fell in between these means. Additionally, there was a marginally significant interaction between feedback condition and class year, $F(4, 95) = 2.19, p = .08$. Seniors who received person or process praise reported higher perceived competence than seniors in the control condition while lower classmen showed no differences according to condition. See Table 2, Figure 2.

Contingent-self worth

While no significant main effects were found for feedback condition, $F(2, 96) = .37, ns$, there was an interaction between feedback condition and gender, $F(2, 96) = 5.79, p < .005$. Women reported higher levels of contingent self-worth in the person praise and no praise conditions than in the process praise condition, while men showed the opposite pattern. See Table 3. This pattern fits with previous research on gender differences in contingent self-worth (Crocker & Wolfe, 2001) and praise (Corpus & Lepper, 2007; Koestner, Zimmerman, & Koestner, 1989).

Performance Attributions

No significant effects were found for feedback condition on person, $F(2, 94) = 1.75, ns$, or process attributions, $F(2, 96) = .15, ns$. This null finding may be due to the confusing wording of the measure used.

Conclusions and Significance

While previous research has established the positive effects of process praise and potentially negative effects of person praise on children's intrinsic motivation, the current research extends these findings to adulthood. Given the increasing necessity of a college education to succeed in the workforce, understanding the counterintuitive effects of commonly used motivators is crucial for fostering and maintaining a productive and nurturing learning environment. As praise is used repeatedly in classroom settings, its double-sided effects are likely to accumulate over time. Informing educators of the potential pitfalls of person praise and motivational benefits of process praise could increase ultimate effectiveness of educating the population at all stages of development.

This study also reveals the value of examining developmental differences in college rather than equating all undergraduates to one another and to adults. Particularly interesting was that freshmen were the only group who remained relatively unaffected by the feedback manipulation. Considering how much research is conducted with students from introductory psychology classes, which often consist of mostly freshmen, it is possible that effects of praise or related constructs have been overlooked or misconstrued. Future research must consider implications of continuing motivational development even in settings of higher education.

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Table 1. Descriptive Statistics of Self-Reported Intrinsic Motivation Following Failure

	Control	Person Praise	Process Praise	Total
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Freshmen	5.35 (.85) _a	5.09 (.66) _a	5.53 (.77) _a	5.34 (.77)
Sophomore/Junior	5.56 (.84) _a	4.50 (.80) _b	5.12 (.99) _{ab}	5.16 (.95)
Senior	4.83 (1.28) _a	5.43 (.86) _a [†]	6.18 (.79) _b	5.46 (1.14)
Total	5.28 (1.01) _{ab}	5.03 (.83) _a	5.65 (.90) _b	5.32 (.95)

Note. Means that do not share subscripts across each row differ significantly ($p < .05$; Tukey contrasts).

[†] Person versus process was significant at the $p < .10$ level.

Table 2. Descriptive Statistics for Perceived Competence

	Control	Person Praise	Process Praise	Total
	M (SD)	M (SD)	M (SD)	M (SD)
Freshmen	4.87(.83) _a	4.73(.63) _a	4.92(.58) _a	4.85(.68)
Sophomore/Junior	4.67(.90) _a	4.50(.85) _a	5.06(.77) _a	4.70(.85)
Senior	4.03(.89) _a	4.74(.52) _b	5.30(.79) _b	4.67(.91)
Total	4.55(.92) _a	4.67(.65) _{ab}	5.08(.69) _b	4.75(.81)

Note. Means that do not share subscripts across each row differ significantly ($p < .05$; Tukey contrasts).

Table 3. Descriptive Statistics for Contingent Self-worth

	Control	Person Praise	Process Praise	Total
	M (SD)	M (SD)	M (SD)	M (SD)
Female	5.65(.74) _a	5.60(1.12) _{ab}	5.09(.55) _b	5.46(.83)
Male	5.25(.72) _a	4.99(.98) _a	5.81(.76) _b	5.34(.87)
Total	5.45(.75) _a	5.25(1.07) _a	5.45(.75) _a	5.39(.85)

Note. Means that do not share subscripts across each row differ significantly ($p < .05$; Tukey contrasts).

Effects of Praise and Year in School on Self-Reported Intrinsic Motivation

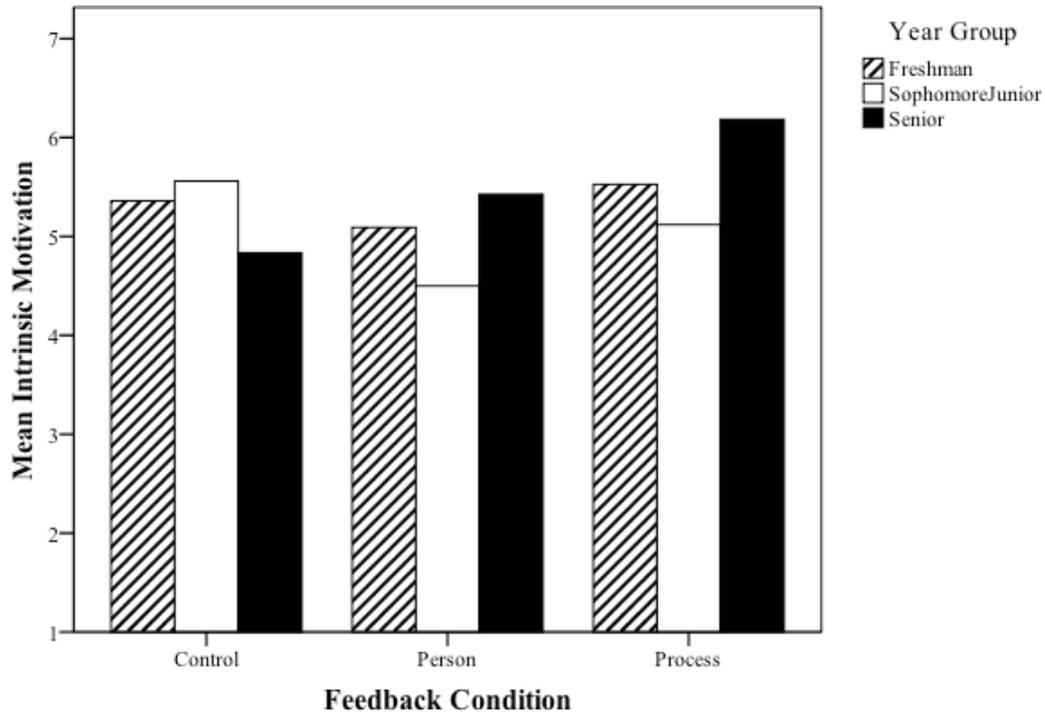


Figure 1. Mean self-reported intrinsic motivation by feedback condition and school year.

Effects of Praise and Year in School on Perceived Competence

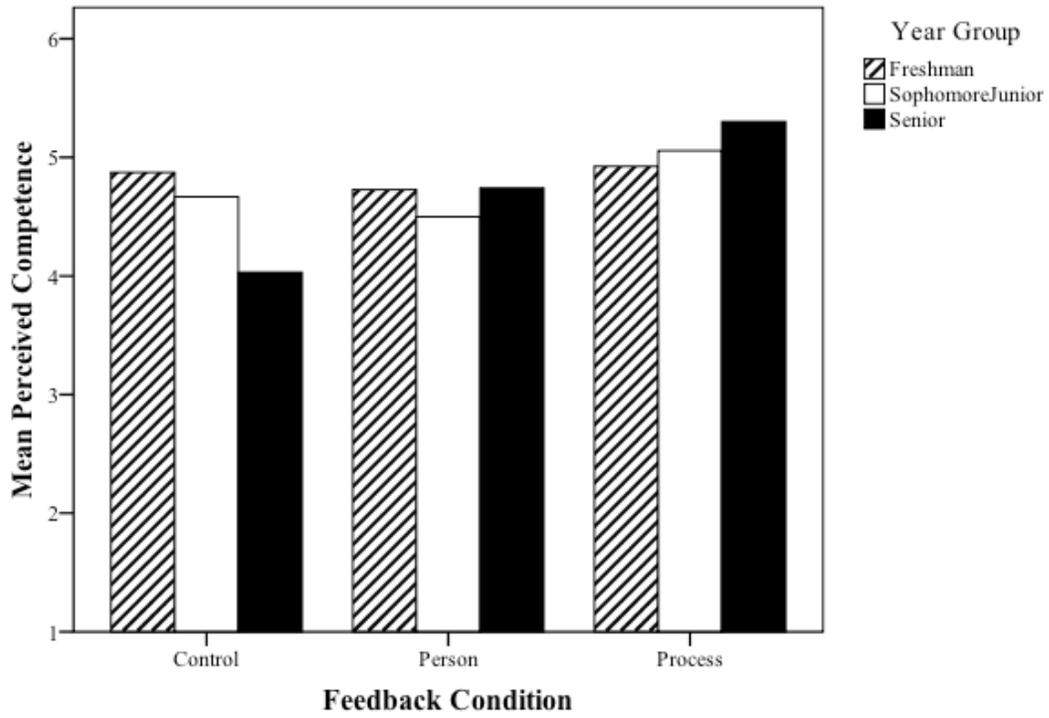


Figure 2. Mean perceived competence by feedback condition and school year.