Positive Mood and Future-Oriented Self-Evaluation

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When individuals think about their future, feedback on their strengths and weaknesses may often serve as a useful source of information. Three studies investigated the influence of positive and neutral moods on feedback seeking. In Studies 1 and 2, positive mood increased interest in feedback about weaknesses when this information was useful for self-assessment and self-improvement. But when the feedback was not useful for these superordinate, long-term goals then positive mood directed participants' interest to strength-focused feedback, thereby serving short-term, affective concerns (e.g., feeling good about oneself). Study 3 directly manipulated self-evaluative goals. When a learning goal was activated, positive mood increased interest in weaknesses-focused feedback, but when an affective goal was activated, positive mood increased interest in strength-focused feedback. These results support our hypothesis that positive mood attunes individuals to the relationships of goals and means, thus promoting actions that serve primary goals.

Thinking about one's future and effectively planning it often requires answering self-evaluative questions. What kind of field of study, job, or relationship am I suitable for? Do I possess the prerequisite skills for doing what I want? What kind of skills do I still need to acquire or improve? These questions may prompt individuals to learn more about themselves and seek diagnostic feedback about their skills and competencies. However, when faced with the possibility of receiving feedback about one's weaknesses, individuals may experience a motivational conflict (e.g., Trope, 1986). The feedback may be useful for the future-oriented learning goals, but it may also produce negative esteem-related affect (e.g., Higgins, 1987; Weiner, 1986) and disconfirmations of prior self-beliefs (e.g., Swann, 1990). If

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individuals are motivated to feel good, raise their self-esteem, or validate positive
self-beliefs, then strength-focused feedback is more instrumental for achieving
these goals than is weakness-focused feedback (see Trope, 1979, 1980; Trope &
Neter, 1994). If, however, individuals are more motivated to assess their abilities
and obtain useful information that will potentially improve their abilities, then
diagnostic, weakness-focused feedback should be their first choice (e.g., Trope,
1986; Trope & Neter, 1994).

What is the role of mood regarding the preference of feedback that serves
either long-term learning goals or short-term affective goals? There has been ex-
tensive research on self-evaluation processes (e.g., Freitas, Salovey, & Liberman,
2001; Trope & Pomerantz, 1998; Trope, Gervey, & Bolger, 2003), as well as
on mood and its influence on information processing and self-regulation (for an
overview, see Martin & Clore, 2001). However, few studies have related these
processes (e.g., Trope & Neter, 1994). The purpose of our present research is to
examine more closely how positive mood influences interest in feedback about
strengths and weaknesses, and under which conditions positive mood increases
self-regulation with respect to long-term improvement.

OVERCOMING SHORT-TERM COSTS: MOOD AS A RESOURCE

Positive mood may serve as a resource in that a threshold of positive feelings
about oneself has to be reached in order to pursue learning goals in the face of a
threat to self-esteem (e.g., Aspinwall, 1998; Aspinwall & Brunhart, 1996; Reed
& Aspinwall, 1998; Trope & Neter, 1994; Trope & Pomerantz, 1998). Trope and
Neter (1994) demonstrated that positive experiences and positive mood enhanced
participants' interest in weakness-focused feedback compared to strength-focused
feedback. The authors discuss these results as evidence that positive affective states
serve as resources (i.e., means) for coping with the immediate affective costs of
feedback about weaknesses, thus increasing individuals' interest in valuable infor-
mation for future improvement. Similarly, Raghunathan and Trope (2002) investi-
gated how positive mood serves as a resource when individuals are confronted with
persuasive messages (e.g., an essay on the health consequences of caffeine con-
sumption). As predicted, positive mood enhanced the effect of counter-attitudinal
messages on individuals' memory and attitudes when those messages were rele-
vant to the self (strong caffeine consumers), but less so when the messages were
not relevant to the self (modest caffeine consumers).

These studies on mood as resource suggest that positive mood increases
individuals' interest in information that serves learning goals (e.g., self-assessment
and self-improvement). Interestingly, however, this effect of positive mood seems
to be more pronounced when information is relevant to the self (cf. Reed &
Aspinwall, 1998). It is possible, then, that positive mood may serve as a resource
or as a goal, depending on the usefulness of the available means. That is, under

positive mood individuals may be particularly sensitive to the usefulness of means for goals. If this is true, why is this sensitivity increased under positive mood, and how does it change the representation of means-goals relationships?

POSITIVE MOOD INFLUENCES THE STRUCTURE OF MEANS-GOALS RELATIONSHIPS

Our current reasoning extends the mood-as-resource approach (see also Trope, Igou, & Burke, 2006). We propose that positive mood promotes action in accordance with individuals' primary goals, and this self-regulatory behavior results from characteristic cognitive representations of means-goals relationships under positive mood. These representations can be best described as high-level construals of means-goals relationships (e.g., Liberman & Trope, 1998; Trope & Liberman, 2000, 2003; Vallacher & Wegner, 1987, 1989). According to construal level theory (CLT, Trope & Liberman, 2003), in self-regulation high-level construals are abstract mental models that represent actions in terms of features that relate to primary goals of actions, which are defined as central to the meaning of action (e.g., Higgins & Trope, 1990; Kruglanski, 1975). These construals are coherent, well-structured representations, in that they include goal-relevant information. In contrast, low-level construals include concrete and goal-irrelevant information.

Why does positive mood promote high-level construals in self-regulation? We propose that positive mood attunes individuals to means-goals relationships (e.g., Kruglanski et al., 2002). That is, positive mood increases individuals' ability to *detect* the utility of means to serve a goal. Our proposal is consistent with research on the impact of positive mood on information processing. This research has demonstrated that, due to their greater cognitive flexibility, happy individuals are better able to "see" the relatedness within and between cognitive categories (Isen & Daubman, 1984; Isen, Johnson, Mertz, & Robinson, 1985; see also Murray, Sujan, Hirt, & Sujan, 1990; see Ashby, Isen, & Turken, 1999 for a neuropsychological explanation; see Isen, 1987, 2004 for overviews). This research also suggests that, based on these processing characteristics, positive mood facilitates the formation of coherent cognitive structures. For example, participants who were asked to choose among six hypothetical cars reached their decisions sooner and *reduced information* more efficiently when in a positive mood than when in a neutral mood (Isen & Means, 1983). In other words, positive mood increased participants' ability to distinguish relevant from irrelevant pieces of information. Along the same lines, person perception research has shown that positive mood promotes structured representation of information about others as evidenced by an increase in *clustering* in recall of such information (Bless, Hamilton, & Mackie, 1992).

In addition to its influence on the organization of knowledge, positive mood has been shown to promote the use of well-structured information in judgments and decisions (e.g., Bless, 2001). For instance, positive mood increases reliance on general knowledge structures such as stereotypes and scripts (e.g., Bless, Clore

et al., 1996; Bodenhausen, Kramer, & Süsser, 1994). However, positive mood also increases individuals' sensitivity to information that is inconsistent with general knowledge structures (e.g., Bless, Schwarz, & Wieland, 1996). In general, these results suggest that positive mood enhances the tendency to relate specific information (e.g., exemplar) to abstract information (e.g., category). This tendency is also reflected in a recent series of studies on mood influences on perception. For example, participants in a positive mood tend to reconstruct visual images and classified figures more in terms of their global (versus local) features than participants in a sad mood (Gasper & Clore, 2002).

Aspinwall (1998) proposed an integrative framework for explaining the influence of positive mood on the perceived and actual progress in goal achievement. As in Martin's mood-as-input model (e.g., Martin, 2001; Martin, Ward, Achee, & Wyer, 1993), Aspinwall assumes that mood serves as information much like other pieces of information (cf. Schwarz & Clore, 1983). Thus, mood informs individuals about their progress toward personal goals. As a second component, Aspinwall refers to processing advantages of positive mood (e.g., Isen, 2004), which increase the understanding of one's progress towards important goals. In addition, the richer and flexible view of the task context moderates behavior successfully with regard to goal achievement. As a third component, positive mood serves as a resource against negative self-relevant information (e.g., Trope & Pomerantz, 1998). Aspinwall stresses that both processing advantages and mood-as-resource interact such that additional resources through positive mood may increase processing advantages, and that processing advantages may in turn conserve resources. Importantly, according to Aspinwall's (1998) moderated hedonic contingency hypothesis, positive mood's resource function is likely to occur when the negative information is useful for individuals' goals. Otherwise, positive mood may promote an avoidance of negative information, thus serving hedonic concerns (e.g., to feel good about the self; cf. Isen, Shalker, Clark, & Karp, 1978; Isen, 1993).

Our model relates to Aspinwall's (1998) integrative framework for understanding self-regulation as a function of positive mood. We address in detail how processing characteristics of positive mood influence the structure of goal systems, and how these structures relate to positive mood's role as resource in self-regulation. In short, we argue that positive mood's processing characteristics facilitate structured, high-level construals of means-goals relationships and that these representations promote action in line with individuals' primary goal.

POSITIVE MOOD AND INTEREST IN FEEDBACK

The implications of this analysis for self-evaluation are straightforward: Individuals ordinarily see learning as the superordinate goal of receiving feedback and feeling good about themselves as a secondary consideration (see e.g., Freitas et al., 2001). If it is true that positive mood promotes high-level

construals of self-evaluation situations, then positive mood should increase interest in weakness-focused feedback, compared to strength-focused feedback, in order to achieve their learning goal. However, although learning from feedback is often the superordinate goal in self-evaluation situations, sometimes this goal may become secondary to the goal of feeling good about the self. The value of learning from feedback may be relatively low if feedback is not important for the personal attribute in question. Individuals may then prefer strength-focused feedback so that they could at least feel good about themselves. Also, if feedback is not diagnostic of the personal attribute, it is not useful for the assessment and improvement of this quality, and individuals would again prefer strength-focused feedback to weakness-focused feedback. If, as we propose, positive mood increases sensitivity to instrumental means-goals relationships, then positive mood should increase feedback seeking in accordance with the short-term affective goal when feedback is relatively useless with respect to long-term learning goals. Consequently, in these situations positive mood should enhance interest in strength-focused feedback relative to weakness-focused feedback.

As this line of reasoning suggests, the importance and diagnostic value of feedback may change the influence of mood on feedback seeking. However, other contextual features may also determine the influence of mood on feedback seeking. Individuals are often instructed to use the feedback for learning about themselves. But sometimes they may be simply asked to enjoy or feel good about themselves. Under these circumstances, the long-term learning goal may become secondary to an affective goal. Therefore, given a learning goal, positive mood would promote greater interest in weakness-focused feedback, but when given an affective goal, positive mood would promote greater interest in strength-focused feedback.

STUDY 1

As a first step, we tested the hypothesis that goal-consistent feedback search is a function of mood and the usefulness of feedback. We manipulated mood states so that participants in either positive or neutral moods were presented with feedback about strengths and weaknesses in their abilities. The feedback either related to a skill that contributed to the global goal of life satisfaction or to a skill that was only weakly related to this global goal. The feedback thus varied in importance, because the value of learning from it was either high or low.

We predicted that when feedback was important, positive mood would promote self-evaluation strategies with regard to superordinate learning goals. Consequently, we expected a stronger interest in feedback about weaknesses than about strengths when participants were in a positive mood than when they were in a neutral mood. However, when the feedback was unimportant for life satisfaction, we expected the subordinate affective goal (feeling good about oneself) to become the participants' primary goal, especially for participants in a positive mood. In

short, we predicted that positive mood increases the interest in weakness feedback relative to strength feedback when feedback was important for life satisfaction. But, in contrast, we predicted that positive mood would increase participants' interest in strength feedback relative to weakness feedback when feedback was not instrumental for life satisfaction.

Method

Participants and Design

Eighty-five (53 female, 32 male) college students at New York University participated in exchange for course credit. In this study, each participant was given access to feedback about strengths and weaknesses for important and unimportant skills with regard to a global goal. Participants were randomly assigned to mood and feedback order conditions, leading to a mixed 2 (mood: positive vs. neutral) × 2 (feedback order) × 2 (feedback importance: high vs. low) × 2 (feedback valence: strengths vs. weaknesses) design, with mood and feedback order as between-participants factors, and with feedback importance and feedback valence as within-participants factors.

Procedure

Upon entering the lab, participants were informed that they were engaging in several unrelated tasks. Each group was randomly assigned to a mood condition.

Mood-induction procedure. Moods were induced with a modified version of the autobiographical memory procedure used by Trope and Neter (1994). Positive mood participants were asked to recall three positive events that had occurred within the recent past. However, they were also told that we were predominantly interested in whatever physical sensations they associated with the events, as opposed to the events themselves. This was done to minimize the relevance of the events themselves, to mitigate the possibility that the actual content of their recollections, as opposed to the affective state those memories induced, was not affecting their self-evaluations in later phases of the experiment. Neutral mood participants were asked to complete a similarity judgment task shown to be affectively neutral.

Mood manipulation check. After completing the mood induction task, participants filled out a brief "background questionnaire" that contained the mood manipulation check ("please indicate your present mood") on a scale from 1 (*sad*) to 9 (*happy*), as well as several irrelevant filler items. When they finished this questionnaire, participants were seated in front of a computer screen and asked to enter their student ID number when they were ready to begin the next phase

of the experiment. Each computer station contained a program written in the MEL programming language. The experimental instructions appeared first, in a sentence-by-sentence format. Striking a marked key accessed each subsequent sentence.

The instructions indicated that all participants had filled out "the Preconscious Relations Abilities Scale" (the PRAS) as part of a testing session that had occurred earlier in the semester, that their responses to the PRAS had been entered into a database and analyzed, and that the current experiment was their opportunity to search through that database. "Preconscious relations abilities" were described as "those abilities people have to understand how and why thoughts, feelings, attitudes, motives and other types of issues fit together on an intuitive, instinctive level." The instructions went on to say that there were wide disparities in how well developed these abilities were, and that they tended to operate without conscious thought or intention. The instructions explained that very few people were familiar with what the PRAS measured, so participants would first get a chance to look at a sample of their own feedback which was made accessible when they entered their student ID's at the start of the program.

Feedback importance manipulation. Participants were told the PRAS measured two basic sets of skills: inter-personal skills and intra-personal skills. Inter-personal skills were defined as abilities that lead to the intuitive understanding of issues, attitudes, motives and goals between people, whereas intra-personal skills were defined as abilities that contribute to the understanding of how issues, goals and motives fit together within individuals. Finally, the instructions randomly indicated that either inter- or intra-personal skills were most important for overall life satisfaction, and indicated the order in which a brief sample of the participant's feedback would be presented. Therefore, when feedback would serve life satisfaction, it was more important for self-assessment and self-improvement concerns than when feedback was not useful for life satisfaction.

Participants were told that in exchange for receiving the feedback, they would have to complete additional questionnaires assessing the clarity and comprehensibility of the feedback. To ensure that participants knew what kind of feedback they could receive, they were given access to summary feedback along 10 (5 strengths, 5 weaknesses) inter-personal dimensions and 10 (5 strengths, 5 weaknesses) intra-personal dimensions. These twenty items were selected based on pilot testing.[4]

When participants were exposed to feedback, they were presented with a flashing fixation point in the center of the screen for 300 ms. For 1000 ms the fixation point was then replaced with the phrase "your test indicates you have the

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[4]These items were selected based on pilot testing, using the following criteria: 1) they were judged to be believable skills on which people would seek feedback; 2) they were deemed plausible inter-personal or intra-personal skills, and; 3) pre-test participants thought it very possible that they possessed these weaknesses and strengths.

following ability:" After the 1000 ms elapsed, a valence cue would appear for 500 ms, telling the participant that the feedback would refer to either a *weakness* or *strength* they possessed. Finally, the randomly presented sample feedback itself would appear, along with the prompt to press the spacebar when they were ready to continue on to the next item. Unbeknownst to participants, the duration between the appearance of the feedback and the pressing of the spacebar was recorded in ms.

Dependent variables. This procedure allowed us to measure the *reading time* as one indicator of participants' interest in feedback. Once they completed the sample feedback within each block (e.g., inter- and intra-personal abilities), participants were asked to *indicate how interested* they were in receiving additional feedback about their strengths and weaknesses on scales from 1 (*not at all interested*) to 9 (*extremely interested*).

After they finished the second block of sample feedback, a text screen appeared indicating that it would take a little bit of time for the feedback requests to be processed, and that they should spend that time filling out a very short questionnaire. The final questionnaire included the feedback importance and feedback valence manipulation checks.

Manipulation checks. We asked participants to rate the *importance of the two dimensions* of the PRAS ("Having seen these items, how important a role do you think the inter-personal (intra-personal) aspects of social intelligence play in life?"), on scales from 1 (*not at all important*) to 9 (*extremely important*). The perceived *valence of feedback* was assessed separately for strengths and weaknesses ("Please rate the extent to which the strengths (weakness) feedback you expect to receive from us refers to liabilities or assets"), on scales from 1 (*extreme liability*) to 9 (*extreme asset*). After the data were collected, participants were fully debriefed and thanked for their participation.

Results and Discussion

Manipulation Checks

Participants in the positive *mood* condition reported significantly more positive affect than those in the neutral condition ($M = 6.82$ vs. $M = 5.65$), $F(1,84) = 24.4$, $p < .001$. The *feedback valence* manipulation check revealed anticipated strengths feedback to be significantly more positive than weakness feedback ($M = 6.52$ vs. $M = 4.13$), $F(1, 84) = 72.5$, $p < .001$. The effect of the *feedback importance* manipulation was successful, $F(1,84) = 283.1$, $p < .001$, with feedback said to be more important for overall life satisfaction being rated as more important than feedback said to be less related to life satisfaction ($M = 7.66$ vs. $M = 4.54$).

Interest in Feedback

We hypothesized that when the feedback was important for the global goal, positive mood would increase participants' interest in their weaknesses rather than their strengths. However, when the importance of feedback was relatively low, positive mood was predicted to increase feedback seeking about strengths rather than weaknesses. To test these hypotheses, participants' interests in feedback with high versus low importance were used as the dependent variables in a mixed 2 (mood) $\times$ 2 (feedback valence) $\times$ 2 (feedback importance) analysis of variance (ANOVA) with repeated measures, with mood as between-participants variable and feedback valence and importance as within-participants variables. Although several lower order effects were significant, including main effects of valence, $F(1,84) = 7.81$, $p < .05$, and feedback importance, $F(1,84) = 47.09$, $p < .001$, and 2-way interactions between feedback importance and mood, $F(1,84) = 7.96$, $p < .05$, and feedback importance and valence, $F(1,84) = 29.0$, $p < .001$, these effects were conditional on the higher-order three-way interaction of mood, feedback valence and feedback importance, $F(1,83) = 67.94$, $p < .001$. As indicated in Fig. 1, participants in the positive mood condition preferred weakness to strength feedback when that feedback dealt with high importance attributes ($M = 7.48$ vs. $M = 5.07$), $t(41) = 10.93$, $p < .001$. In contrast, participants in the positive mood condition
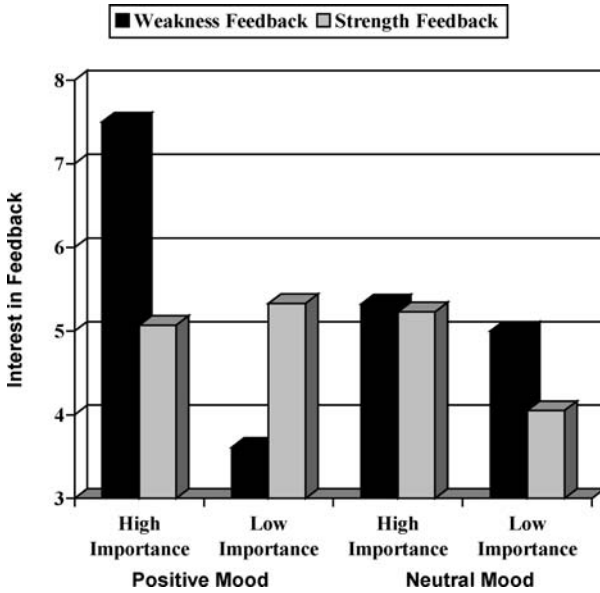

Fig. 1. Interest in feedback as a function of mood, feedback importance and valence (Study 1).

requested significantly less weakness feedback than strength feedback when that feedback was relatively unimportant ($M = 3.62$ vs. $M = 5.33$), $t(41) = 7.79$, $p < .001$.

Reading Time for Sample Feedback

The time that participants read each item of sample feedback was divided by the number of words in that item of sample feedback, and then grouped by feedback valence and importance, yielding four 5-item averages: (1) reading time for important weaknesses, (2) reading time for important strengths, (3) reading time for unimportant weaknesses, and (4) reading time for unimportant strengths. These four items were then treated as the dependent variables in a mixed 2 (mood) $\times$ 2 (feedback valence) $\times$ 2 (feedback importance) analysis of variance (ANOVA) with repeated measures, with mood as between-participants variable and feedback valence and importance as within-participants variables. Although some lower-order effects were significant, they were conditional on the higher-order three-way interaction. The three-way interaction of mood, feedback valence, and feedback importance interaction was significant, $F(1,82) = 18.69$, $p < .001$. As indicated in Fig. 2, under positive mood participants spent more time reading weakness
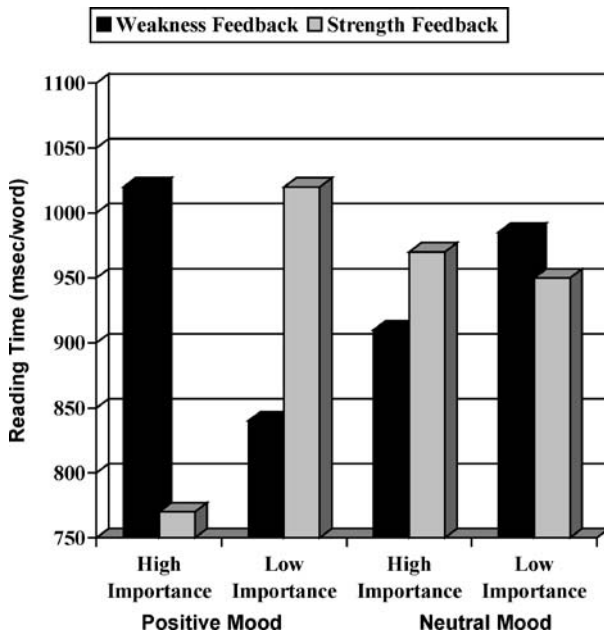

Fig. 2. Selective exposure to feedback as a function of mood, feedback importance and valence (Study 1).

feedback than strength feedback when feedback was important, ($M = 1022.18$ ms vs. $M = 771.71$ ms), $t(41) = 5.65$, $p < .01$. However, when the sample feedback referred to relatively unimportant skills, positive mood participants spent more time reading about their strengths than about their weaknesses ($M = 1023.17$ ms vs. $M = 837.23$ ms), $t(41) = 4.20$, $p < .01$.

Both measures of interest in feedback (ratings of interest and reading time) indicate that when feedback was important for life satisfaction, positive mood promoted interest in weaknesses. When feedback was relatively unimportant for life satisfaction, the value of learning from this feedback was relatively low. In this case, positive mood promoted a switch in feedback interests, thus serving an affective goal. In the experimental instructions feedback was portrayed as something valuable, which individuals will be provided with in exchange for answering additional questions. However, results suggest that the specific value of feedback was a function of the manipulations of mood and feedback importance. Taken together, the results are in accordance with our general assumption that positive mood's effect on feedback interest is moderated by the importance of this information for self-evaluative goals. The next study will examine in more detail how this effect of positive mood is mediated by the sensitivity to means-goals relationships.

STUDY 2

The present Study 2 was designed to examine the influence of positive mood on feedback seeking as a function of the instrumentality of feedback for self-assessment. To vary the instrumentality of feedback for these learning goals, we described feedback as either diagnostic or rather non-diagnostic for a personal attribute. In addition to manipulating mood and diagnosticity of feedback, we also measured the perception of means-goals relationships. We hypothesized that the effects of mood and feedback diagnosticity on feedback interest would be mediated by sensitivity to the instrumentality of means for goals. Specifically, when feedback was diagnostic, positive mood was expected to facilitate the detection of feedback's usefulness for long-term learning goals. However, when feedback was not diagnostic and thus not useful for the long-term learning goals, we expected that the short-term affective goal would become relatively more prominent than these long-term goals. Consequently, positive mood was expected to sensitize individuals to the impact of feedback on their anticipated short-term affective responses.

Method

Participants and Design

Eighty (58 female, 22 male) students at New York University participated in exchange for course credit. Again we randomly assigned participants to (positive

vs. neutral) mood conditions. In this study, participants indicated their interest in receiving strength and weakness feedback along six different "dimensions" of social intelligence, and we varied the diagnosticity of this feedback by framing it as diagnostic or rather non-diagnostic with regard to an important quality (social intelligence), resulting in a mixed 2 (mood: positive vs. neutral) × 2 (feedback diagnosticity: high vs. low) × 2 (feedback valence: weaknesses vs. strengths) design, with mood and feedback diagnosticity as between-participants factors and feedback valence as a within-participants factor.

Procedure

Upon entering the lab, participants were informed that they would be engaging in several unrelated tasks. As in Study 1, we *manipulated moods* with a modified version of the autobiographical memory procedure used by Trope and Neter (1994), and we used the same *mood manipulation check* ("please indicate your present mood" an a scale from 1, *sad*, to 9, *happy*) as part of a "background questionnaire." When they finished this questionnaire, participants were seated in front of a computer screen and asked to enter their student ID number when they were ready to begin the next phase of the experiment. Then all participants were told that they had previously filled out a social intelligence questionnaire as part of a group-testing session that had occurred earlier in the semester. Those in the *high feedback diagnosticity condition* were told that: "Our test breaks down social intelligence into a large number of skills and abilities. We've been using this test for quite some time, and know it to be an extremely reliable, accurate measure of social intelligence. In other words, when this test determines your strengths and weaknesses, you can be sure that it is tapping into something . . . it doesn't measure things that aren't there."

Whereas those participants in the *low feedback diagnosticity condition* were told that: "Our test breaks down social intelligence into a large number of skills and abilities. This is the first time that this test has been used, so we are uncertain as to how reliable and accurate a measure of social intelligence it is. In other words, when this test determines your strengths and weaknesses, you can't be sure that it is tapping into something . . . it may measure things that aren't there."

All participants were then given a brief description of what social intelligence was ("how well you pick up on the thoughts, feelings, attitudes, and motivations of others on an intuitive, instinctive level") and asked to indicate their interest in receiving feedback. Participants were told that in exchange for receiving the feedback, they would have to fill out follow-up questionnaires rating the clarity and comprehensibility of the feedback, and were asked to fill out the NYU mailing label with their current address. The experimenter then pointed out that the more feedback they requested, the longer it would take them to fill out the

follow-up questionnaires, and collected their mailing labels with the promise that the feedback would be sent out within two business days along with the clarity questionnaires and a stamped, self-addressed envelope in which to send the questionnaire back to the psychology department.

Interest in feedback. Participants indicated their interest in their strengths and weaknesses along six different "axes" of social intelligence. The six items were: 1) the intuitive understanding of what other people like or dislike; 2) the ability to determine how patient others will be with you; 3) the ability to assess the way other people will establish cause and effect; 4) the ability to assess the willingness of others to adopt different problem solving approaches (e.g., new ways of doing things); 5) the ability to assess the willingness of others to be flexible in their thought processes; and 6) the ability to assess the extent to which others understand your feelings. The items were randomized, with valence counterbalanced. Responses were rendered on scales from 0 (*not at all interested*) to 9 (*extremely interested*).[5]

Anticipated affect and perceived usefulness for learning goals. Following the interest measures, participants were asked to indicate how "hearing about the weak points (strong points) in social intelligence you possess will make you feel" on 7 bipolar scales (*worse–better, sad–happy, bad–good, dissatisfied–satisfied, tense–relaxed, unconfident–confident*, and *unpleasant–pleasant*). Scale values ranged from -3 to $+3$, without 0. Afterwards, specific questions were asked to measure the perceived usefulness of the feedback for learning goals: 1) "To what extent do you think information about your strong (weak) points will help you develop a more accurate assessment of your social intelligence abilities?"; 2) "To what extent do you think information about your strong (weak) points will help you increase your understanding of how you function in social settings?"; and 3) "To what extent do you think information about your strong (weak) points will help you improve your ability to function in social settings?" Responses were rendered on scales from 1 (*not at all*) to 6 (*very much*).

Feedback-diagnosticity manipulation check. The final page of the questionnaire included the valence-specific manipulation checks of feedback diagnosticity ("In general, to what extent do you think the strengths (weaknesses) we assessed in the social intelligence test accurately describe the strengths (weaknesses) you possess"), on a scale from 1 (*extremely inaccurate*) to 9 (*extremely accurate*). After the data were collected, participants were fully debriefed and thanked for their participation.

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[5]These six items were selected based on pre-testing 20 possible items, using the following criteria: 1) they were judged to be believable aspects of social intelligence; 2) participants in the pretest believed them to be at least moderately important aspects of social intelligence; 3) pretest participants thought it very possible but not certain that they possessed both weaknesses and strengths in each area.

Results and Discussion

Manipulation Checks

Participants in the positive *mood* condition reported experiencing more positive mood than those in the neutral mood condition ($M = 7.55$ vs. $M = 5.95$), $F(1,78) = 29.67$, $p < .001$. Also the manipulation of *feedback diagnosticity* was successful, $F(1,76) = 13.55$, $p < .001$, with those in the diagnostic feedback condition perceiving the test to be more accurate than those in the non-diagnostic feedback condition ($M = 6.15$ vs. $M = 5.08$).

Interest in Feedback

We expected that self-evaluative feedback seeking would be determined by the interaction between the value of feedback, feedback valence, and participants' mood. To test this hypothesis, interest in strengths and interest in weaknesses scores were computed by aggregating responses to the six "axes of social intelligence." These aggregated scores were then used as the dependent variables in a mixed 2 (mood) × 2 (feedback diagnosticity) × 2 (feedback valence) analysis of variance (ANOVA) with repeated measures, with mood and feedback diagnosticity as between-participants variables and feedback valence as a within-participants variable.

Several lower-order effects were significant, including the 2-way valence by feedback diagnosticity interaction, $F(1,76) = 29.23$, $p < .001$, and valence by mood interaction, $F(1,76) = 39.68$, $p < .001$. Both effects were conditional on the higher order, three-way interaction of mood, feedback valence, and diagnosticity, $F(1,76) = 38.46$, $p < .001$. As indicated in Fig. 3, participants in a positive mood with highly diagnostic feedback preferred weakness feedback to strength feedback ($M = 7.36$ vs. $M = 4.96$), $t(41) = 5.35$, $p < .05$, whereas the opposite pattern obtained for participants in a positive mood with relatively non-diagnostic feedback ($M = 4.28$ vs. $M = 7.26$), $t(35) = 5.96$, $p < .05$. In contrast, neutral mood participants manifested a different pattern of information seeking. When feedback was diagnostic, participants sought significantly more strengths than weaknesses ($M = 6.80$ vs. $M = 6.30$), $t(21) = 2.19$, $p < .05$, whereas when feedback was non-diagnostic, participants sought strengths and weaknesses equally ($M = 6.23$ vs. $M = 6.32$), $t < 1$.

Anticipated Affect and Perceived Usefulness
for Learning Goals

Before conducting a mediational analysis with anticipated affect and perceived usefulness for learning concerns as mediators, we performed for each of
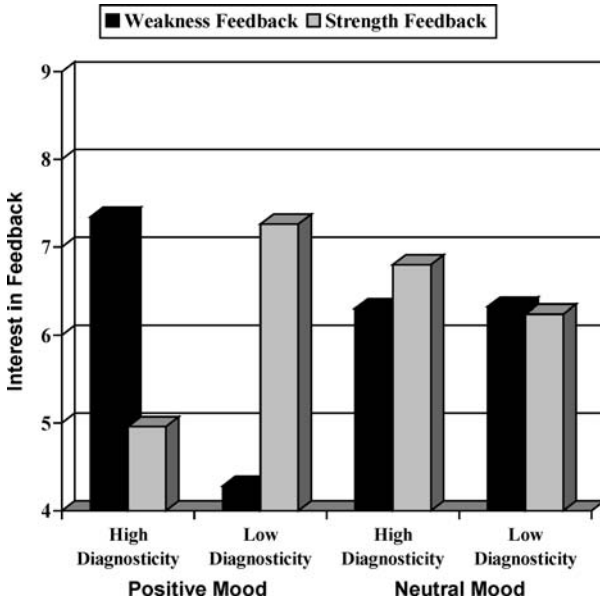
Fig. 3. Interest in feedback as a function of mood, feedback diagnosticity and valence (Study 2).

these measures separate analyses of variance with repeated measures on the basis of a mixed 2 (mood) × 2 (feedback diagnosticity) × 2 (feedback valence) design to investigate the predicted three-way interactions of these variables.

We predicted that positive mood attunes participants to the affective consequences of feedback when its instrumentality for learning goals is low. As indicated in Fig. 4, participants in a positive mood were more sensitive to affective implications of feedback when the diagnosticity of feedback was low relative to high, whereas neutral mood participants showed no such heightened sensitivity, resulting in an interaction of mood, feedback diagnosticity, and feedback valence, $F(1, 76) = 4.02$, $p < .05$. Also as predicted, participants in the condition of diagnostic feedback perceived weakness-focused feedback to be more useful than strength-focused feedback, especially in the positive mood condition, as compared to those participants in a neutral mood. In contrast, those in the condition of relatively non-diagnostic feedback tended to perceive strength feedback to be more useful overall, especially when in a good mood, $F(1, 75) = 6.32$, $p < .05$, for the interaction of feedback diagnosticity and mood (see Fig. 5).
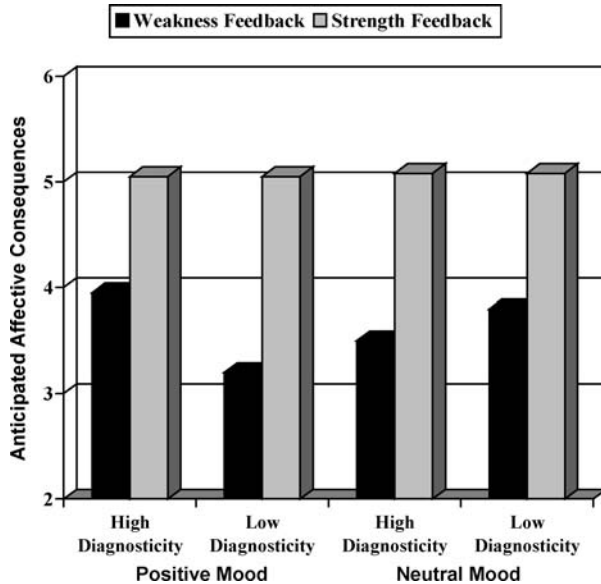
Fig. 4. Anticipated affective response to feedback as a function of mood, feedback diagnosticity and valence (Study 2).

Mediational Analyses

Thus far, results are consistent with our predictions: When feedback was diagnostic, positive mood increased feedback search in accordance with self-assessment and self-improvement concerns. In contrast, when feedback was non-diagnostic, positive mood enhanced interest in feedback that served the affective goal of feeling good about the self. Moreover, the findings regarding the rated instrumentality of feedback for self-assessment and self-improvement concerns and for affective concerns are consistent with our mediational model.

To test the mediational model, two variables were created, indexing the affective costs and informational benefits of feedback. The affective cost measure was constructed by aggregating the anticipated affective response measures for weaknesses, and subtracting from it the aggregated anticipated affective response for strengths. The resulting index was then centered, such that as the anticipated affective response to weakness feedback became more negative relative to strength feedback, the index of affective costs would become increasingly more negative. A similar process was used to create the measure of informational benefits. The perceived benefits of strengths feedback was subtracted from that of weaknesses and the resultant centered, such that as the informational benefits of weaknesses increased relative to those of strengths, the index would become
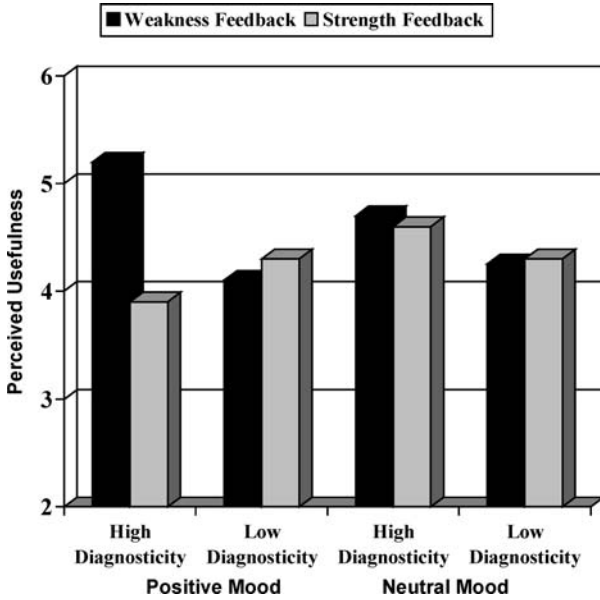
Fig. 5. Perceived usefulness of feedback as a function of mood, feedback diagnosticity and valence (Study 2).

increasingly positive. These two variables were used as mediators, predicting the difference in interest for weakness-focused feedback relative to strength-focused feedback.

Regression analyses were then conducted to examine the mediational role of affective consequences and informational benefits in accordance with the steps outlined by Kenny, Kashy, and Bolger (1997; see also Baron & Kenny, 1986). The initial or predictor variables mood, feedback diagnosticity, and the interaction term mood $\times$ feedback diagnosticity were effects-coded and simultaneously entered as predictors of participants' difference in interest score (weaknesses – strengths).

Mood did not predict participants' interest in feedback ($B = -.11, p > .80$). However, both the feedback diagnosticity and the mood $\times$ feedback diagnosticity variables predicted feedback interest. Specifically, describing feedback as deriving from an accurate or reliable test significantly increased participant's interest in feedback about weaknesses relative to feedback about strengths, $B = 1.22, p < .001$. Moreover, as indicated by the mood $\times$ feedback diagnosticity interaction, the preference for diagnostic (relative to non-diagnostic) weakness feedback relative to strengths feedback was especially evident in positive mood participants, and less so in neutral mood participants, $B = 1.47, p < .001$ (see Fig. 6a).

Next, the same initial variables were used as predictors for affective costs and informational benefits indices. Both feedback diagnosticity and its interaction
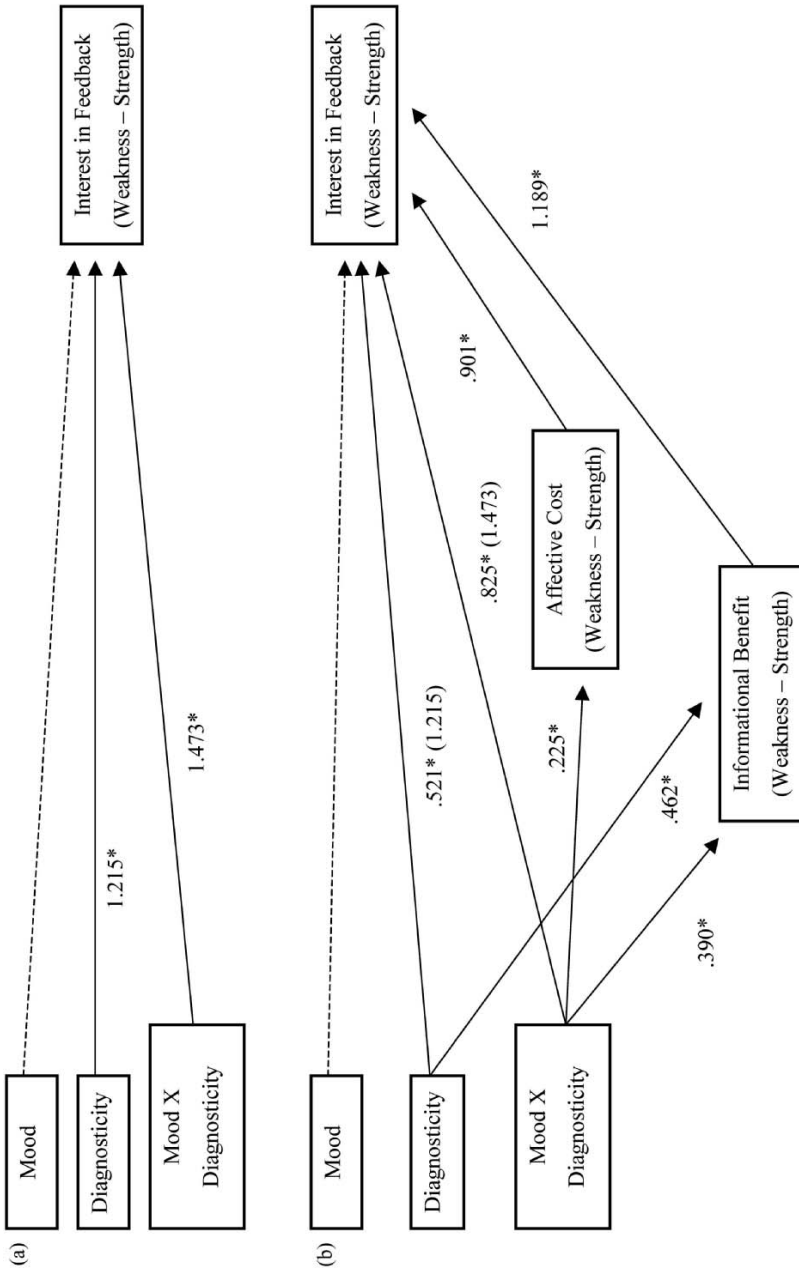
Fig. 6. (a) Initial Regression: Interest in feedback as a function of mood, feedback diagnosticity and valence (presenting unstandardized (*B*) coefficients; Study 2). (b) The effect of the initial variables mood and feedback diagnosticity on interest in feedback mediated by affective cost and informational benefits (presenting unstandardized (*B*) coefficients; Study 2).

with mood predicted the informational benefits index. Diagnostic feedback was associated with greater informational benefits of weaknesses relative to strengths ($B = .46$, $p < .001$). Importantly, positive mood interacted with feedback diagnosticity, such that participants in the condition of positive mood and diagnostic feedback were the most sensitive to the informational benefits of weakness feedback ($B = .39$, $p < .005$). Moreover, the interaction of mood and feedback diagnosticity significantly predicted the affective cost of feedback ($B = .23$, $p < .05$), indicating that positive moods mitigated the perceived affective cost of weakness feedback when participants believed that feedback to be accurate. These results are consistent with the ANOVA results reported above.

Finally, mood, feedback diagnosticity, the interaction of mood and feedback diagnosticity, and the two potential mediators, affective costs and informational benefits, were all simultaneously entered as predictor variables. As shown in Fig. 6b, all of these variables significantly predicted the desirability of weakness relative to strength-focused feedback. Both the perceived affective costs and informational benefits of the feedback significantly predicted the interest in feedback. The significant relationship between the informational-benefit index and interest difference score ($B = 1.19$, $p < .001$) indicates that as the usefulness of negative (relative to positive) feedback increases, the interest in that feedback also increases. In contrast, as the affective costs of weakness feedback (relative to strength feedback) increases (e.g., as the affective cost index becomes more negative), interest in weakness feedback relative to strength feedback decreases ($B = .90$, $p < .001$). In addition, although both feedback diagnosticity and the mood × feedback diagnosticity interaction remained significant predictors of interest, the coefficients describing their predictive utility decreased, suggesting that affective costs and informational benefits were partially mediating the relationship between the initial variables and interest.

Using the process outlined by Kenny and colleagues (1997), the relative strength of both mediating variables was examined to determine whether the partial mediation of feedback diagnosticity and its interaction with mood were significant. Feedback diagnosticity was significantly mediated by the perceived informational benefits of weakness feedback relative to strength feedback ($Z = 3.37$, $p < .01$), suggesting that the way feedback diagnosticity operates is by increasing the perceived benefit of the feedback for assessment and improvement. In addition, the link between the interaction of mood and feedback diagnosticity and interest in weakness relative to strength feedback was significantly mediated by both the affective cost of the feedback ($Z = 2.00$, $p < .05$) and the informational benefits of that feedback ($Z = 2.93$, $p < .05$). Taken together, these two partial mediations suggest that positive mood states simultaneously reduce the anticipated affective cost of diagnosing weaknesses when information is believed to be accurate and reliable, and increase the perceived informational benefits of accurate feedback.

These results support our contention that the relative strength of self-evaluative motives is affected by the value of feedback offered to perceivers *and*

their mood at the time the feedback is made available. Positive mood increased interest in weakness-focused feedback when feedback was diagnostic of one's ability (i.e., social intelligence) and thus instrumental for assessing and improving the self. But positive mood facilitated the consideration of feedback about strengths when feedback was relatively non-diagnostic and thus not instrumental for learning goals. Again, both self-evaluation strategies were less pronounced under neutral mood.

In accordance with these results, when feedback was diagnostic, positive mood promoted the perception of weakness-focused feedback as useful, and strength-focused feedback as relatively non-useful, for self-assessment and self-improvement. But when feedback was *non*-diagnostic, positive mood promoted the impression that weakness-focused feedback results in much less positive affect than does strength-focused feedback. These results provide insight into the nature of the self-evaluative process, indicating that positive mood increases the sensitivity to the instrumentality of feedback with respect to learning goals or affective concerns. Consistently, the impact of mood and diagnosticity of feedback on the interest in feedback was mediated by the perceived informational benefits and affective consequences of feedback.

STUDY 3

The motivational conflict in self-evaluative contexts is between the abstract long-term goal of learning from feedback versus short-term affective goals of feeling good about the self. The first two studies demonstrate that positive mood increases self-evaluation in terms of long-term interest, especially when feedback is useful for achieving these goals; otherwise, positive mood may promote self-evaluation with regard to short-term interest. Study 2 demonstrates that the effects of mood on feedback seeking are mediated by the sensitivity to the instrumentality with which means serve goals.

So far, we argued that positive mood's influence on the detection of the functional relatedness between means and goals contributed to the flexible switch in feedback interests in line with either long-term learning goals or a short-term affective goal. In Study 3 we directly assigned either a learning goal or an affective goal. We predicted that when a learning goal was activated, positive mood would lead to a stronger consideration of weakness-focused feedback than in neutral mood, because this type of feedback is more instrumental for the assigned goal. In contrast, when the affective goal of feeling good was assigned, we expected positive mood to enhance the preference for information about strengths rather than about weaknesses, because this information would best serve the affective goal. We expected this goal-consistent selectivity of feedback to be more pronounced under positive than under neutral mood.

Method

Participants and Design

Seventy-five (46 female, 29 male) college students at New York University participated in exchange for course credit. Participants were randomly assigned to a mixed 2 (mood: positive vs. neutral) $\times$ 2 (motive: learning vs. affective) $\times$ 2 (feedback valence: strengths vs. weaknesses) design, with mood and motive as between-participants factors and feedback valence as a within-participants factor.

Procedure

Upon entering the lab, participants were informed that they were engaging in several unrelated tasks. Each group was randomly assigned to a mood and motive condition. The *mood induction* procedure and the *mood manipulation check* were identical to those used in Studies 1 and 2.

Then participants were told that they had filled out the PRAS (see Study 1), what the PRAS measured, that they could access their own feedback online, and that they would first be shown a sample of their feedback so that they would better understand the kinds of things that could be assessed using the PRAS. After looking over sample feedback, they would be given the opportunity to indicate how interested they were in receiving additional feedback. The procedure of Study 3 differed from the procedures of the previous studies in that it contained a motive instead of a feedback manipulation.

Motive manipulation. The instructions for the current study ended with a motive manipulation adapted from Taylor, Neter, and Wayment (1995). Participants in the learning goal condition were told "you should view this as an opportunity to improve yourself and gain a more accurate appraisal of where you stand." Participants in the affective goal condition were told "you should view this as an opportunity to just feel good about yourself."

All participants were told that they could access a great deal of information, and that in exchange for receiving feedback, they would have to complete additional questionnaires assessing the clarity and comprehensibility of the feedback. They were given access to feedback about personal skills. The duration with which each piece of 'sample feedback' appeared on screen was fixed at 10,000 ms to avoid any potential methodological confounds accruing to differential exposure to weaknesses and strengths.

Dependent variable: Interest in additional feedback. Once they finished with the sample feedback, participants were asked to indicate how interested they were in receiving additional feedback about their strengths and weaknesses, on scales from 1 (*not at all interested*) to 9 (*extremely interested*). After they finished the

second block of sample feedback, a text screen appeared indicating that it would take a little bit of time for the feedback requests to be processed, and that they should spend that time filling out a very short questionnaire.

Feedback valence manipulation check. The final questionnaire included the feedback valence manipulation check. The perceived valence of the feedback was assessed separately for strengths and weaknesses ("Please rate the extent to which the strengths (weakness) feedback you expect to receive from us refers to liabilities or assets"), on scales from 1 (*extreme liability*) to 9 (*extreme asset*). After the data were collected, participants were fully debriefed and thanked for their participation.

Results and Discussion

Manipulation Checks

An analysis of variance (ANOVA) revealed that participants in the *positive mood* condition reported significantly more positive affect than those in the neutral condition ($M = 7.02$ vs. $M = 4.75$), $F(1, 74) = 57.41$, $p < .001$. As the *feedback valence manipulation check* was presented after the mood and motive manipulations, we tested the effect of the feedback valence manipulation in a 2 (mood) × 2 (motive) × 2 (feedback valence) analysis of variance (ANOVA) with repeated measures. Weakness feedback was perceived to be significantly more negative than strength feedback ($M = 2.86$ vs. $M = 5.29$, respectively), $F(1, 74) = 458.35$, $p < .001$.

Interest in Feedback

There were two essential goals of the current study. First, we sought to demonstrate that the activation of specific motives (learning motive vs. affective motive) would lead to systematic differences in the selection of valenced feedback. Second, we sought to demonstrate that positive mood states would increase the magnitude of these differences, such that being in a good mood would facilitate diagnosing weaknesses when a learning goal was activated, but increase the preference for strengths when an affective goal was activated. To test these hypotheses, participants' ratings of interest in strength and weakness feedback were entered as the dependent variables in a mixed 2 (mood) × 2 (feedback valence) × 2 (motive) analysis of variance (ANOVA), with mood and motive as between-participants variables and feedback valence as a within-participants variable.

As indicated in Fig. 7, participants in the neutral mood condition requested more weakness feedback than strength feedback when a learning goal was activated ($M = 6.04$ vs. $M = 5.00$), $t(15) = 3.72$, $p < .05$, and more strength feedback than weakness feedback when an affective goal was activated ($M = 7.05$
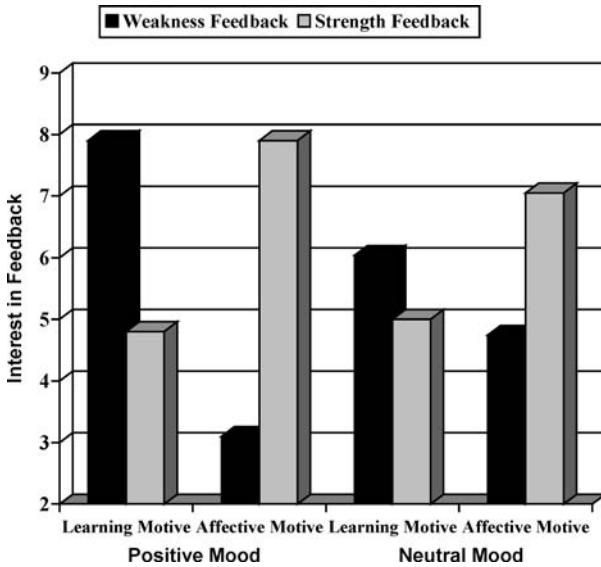
Fig. 7. Interest in feedback as a function of mood, induced motive and feedback valence (Study 3).

vs. $M = 4.74$), t$(17) = 8.49$, $p < .01$. Participants in the positive mood condition also requested more weakness feedback than strength feedback when a learning motive was activated ($M = 7.9$ vs. $M = 4.8$), $t(21) = 12.63$, $p < .001$, and significantly more strength feedback than weakness feedback when an affective goal was activated ($M = 7.9$ vs. $M = 3.1$), $t(21) = 20.14$, $p < .001$. But the magnitude of the differences in requests for weakness and strength feedback within motive condition was significantly greater in the positive mood condition than in the neutral mood condition. When a learning goal was activated, being in a positive mood (relative to a neutral mood) was associated with a significantly greater disparity in the preference for weaknesses over strengths ($M = 3.03$ vs. $M = 1.04$), $t(38) = 5.42$, $p < .05$. And, when an affective goal was activated, participants in a positive mood indicated more interest in strengths than in weaknesses ($M = 4.8$ vs. $M = 2.3$), $t(32) = 6.25$, $p < .05$. Consistent with this pattern of results, the overall three-way interaction of mood, feedback valence and motive was significant, $F(1, 74) = 38.50$, $p < .001$.

We sought to test the effect of primary self-evaluative goals (learning versus affective goal) on feedback seeking under positive versus neutral mood by directly assigning self-evaluative goals. The results provide strong support for the role of positive mood in promoting self-evaluation in accordance with these goals: When learning from feedback was the primary goal, participants preferred weakness-focused feedback to strength-focused feedback, but when feeling good

from feedback was the primary goal, participants preferred strength-focused feedback to weakness-focused feedback.

GENERAL DISCUSSION

The present studies investigated the influence of mood on self-evaluation processes. In Study 1, participants preferred feedback about weaknesses when the feedback was important, that is, when learning from feedback would be valuable. This preference was more pronounced when participants' mood was positive, compared to neutral. When, in contrast, feedback was not important, participants preferred strength-focused feedback. And, as predicted, this preference was more pronounced under positive than neutral mood. In Study 2, we varied the instrumentality of feedback for learning goals. When feedback was diagnostic of the ability in question, positive mood increased interest in weakness-focused feedback, serving learning goals. But when feedback was non-diagnostic, positive mood increased interest in strength-focused feedback, serving an affective goal. In both studies positive mood's impact on feedback seeking was consistent with our reasoning that positive mood attunes individuals to means-goals relationships and that it promotes feedback seeking in accordance with the primary goal. In Study 3, we directly manipulated the primary goal (learning vs. affective goal) for a self-evaluative task. As predicted, positive mood increased the consistency of feedback seeking in line with the primary goal.

Study 2 provides evidence that positive mood increases the sensitivity to means-goals relationships. Especially under positive mood, weakness-focused feedback was evaluated as more useful for self-evaluative learning goals than strength-focused feedback. But this evaluation only occurred when feedback was instrumental for learning goals. When, in contrast, feedback was not useful for learning goals, positive mood increased the evaluation of affective consequences from weakness-focused feedback versus strength-focused feedback. Importantly, these evaluations of informational benefits and affective consequences of feedback mediated the influence of mood and usefulness of feedback on feedback seeking.

Taken together, the results of all three studies support the proposal that positive mood promotes cognitive representations of goals and means that resemble high-level construals as described by construal level theory (Trope & Liberman, 2003). We argue that positive mood attunes individuals to means-goals relationships, thus increasing the detection of the utility with which means serve goals. Consequently, positive mood promotes structure in means-goals representations and thus facilitates self-regulation in line with individuals' primary goals (cf. Aspinwall, 1998). The idea that the influence of positive mood on the detection of the functional relatedness of specific means and goals that are high in the hierarchical goal structure (e.g., Kruglanski et al., 2002) is based, in part, on past research on the impact of positive mood on cognitive organization (e.g., for overviews see

Isen, 1987, 2004; Ashby et al., 1999). This idea is also consistent with findings that positive mood enhances individuals' readiness to relate specific cases to more abstract, global categories (e.g., Murray et al., 1990; Bless, 2001; Gasper & Clore, 2002).

Earlier research on mood as a resource has shown that positive mood increases participants' interest in weakness-focused feedback as compared to strength-focused feedback, indicating that participants in a positive mood were more likely to choose a self-evaluation strategy that was more in line with long-term self-improvement goals than with short-term affective goals (Raghunathan & Trope, 2002; Trope & Neter, 1994). Our current research goes beyond these findings by examining *how* mood changes the perceived relationship between means and goals. Positive mood buffers against the short-term affective costs of negative information when it is perceived to be useful for serving long-term learning goals. However, when the information's utility is lower for learning goals than for affective goals, positive mood enhances individuals' interest in information that serves the latter. Therefore, in these cases, positive mood amplifies the anticipated affective costs and benefits. Mood may still be a resource, but it only buffers against anticipated affective costs when negative information is self-relevant. When information is *not* useful for self-assessment and self-improvement, positive mood may serve as a goal (e.g., Wegener & Petty, 1994; Wegener, Petty, & Smith, 1995; see also Isen et al., 1978).

In conclusion, the present research suggests that mood states play a significant role for individuals' self-evaluative goals that could either relate to the current self-evaluative situation or to future states. Individuals are often in a motivational conflict between long-term benefits of feedback and feeling good about the self (e.g., Trope, 1986; Trope & Neter, 1994). This research demonstrates that positive mood promotes self-assessment when the feedback has the potential to serve these long-term goals (cf., Trope, Gervey, & Bolger, 2003). However, positive mood promotes short-term affective goals, when they are primary or when feedback does not have the qualities necessary for it to serve long-term self-evaluative goals. Our explanation for positive mood's influence on feedback seeking is based on the assumption that positive mood sensitizes individuals to the instrumentality of available feedback in relation to self-evaluative goals. Our results indicate that positive affect alone does not reduce avoidance of unpleasant information. Instead, it is essential that the available information be perceived as useful for realistic self-assessment and potential long-term improvement.

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