

Self-Enhancement, Self-Verification, or Self Assessment? The Intricate Role of Trait Modifiability in the Self-Evaluation Process

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Abstract

The authors examined the dynamic interplay of three self-evaluation motives (self-enhancement, self-assessment, self-verification) in the affective, cognitive, and behavioral domains. Does perceived modifiability of self-attributes (i.e., assertiveness) moderate motive activation in each domain? Participants (a) rated their assertiveness and their perceived modifiability of assertiveness, (b) took an alleged assertiveness test and received bogus performance feedback, and (c) completed measures of affective, cognitive, and behavioral responding. Trait modifiability was associated with a unique pattern of motive activation in each domain. Affective responses were moderated by trait modifiability, as participants who received negative feedback felt worse when they regarded their self-attributes as unmodifiable than modifiable. Cognitive responses were driven by

Resume

La dynamique de trois motivations auto-évaluatives (valorisation, évaluation, et validation de soi) était examinée dans les domaines affectif, cognitif et comportemental. Le degré de malléabilité des attributs du soi modère-t-il l'activation de chacune de ces motivations dans chacun de ces domaines? Les participants (a) évaluaient leur degré de confiance en soi et sa malléabilité, (b) étaient soumis à un test factice mesurant ce même trait puis recevaient un feedback, (c) répondaient à des échelles mesurant leurs réponses affective, cognitive, et comportementale. Le degré de malléabilité du trait était associé à un pattern unique d'activation motivationnelle dans chaque domaine. Les réponses affectives étaient modérées par ce degré: un feedback négatif avait un effet plus délétère lorsque les participants percevaient le trait comme fixe plutôt que malléable. Les réponses cognitives étaient

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the self-verification motive in the case of unmodifiable self-attributes, and by the self-enhancement motive in the case of modifiable self-attributes. Behavioral responses were driven by the self-assessment motive, especially in the case of modifiable self-attributes.

influencées par la motivation à l'auto-validation dans le cas d'une conception fixe des traits et par la motivation à l'auto-valorisation dans le cas d'une conception malléable. Les réponses comportementales étaient influencées par la motivation auto-évaluative, particulièrement dans le cas de cette dernière conception.

A good deal of adult life involves self-evaluation. It involves striving for self-understanding, self-definition, and self-interpretation. Self-beliefs, well-established and newly found alike, often come in juxtaposition with feedback from other persons. Feedback can be felt as exhilarating or hurtful; it can be appraised cognitively as accurate or faulty; and it can lead to intentions for action that will protect, perpetuate, or ameliorate aspects of the self.

Self-evaluation, then, is carried out in three relatively distinct domains of human functioning: feeling, thinking, and behaving. Does the self-evaluation process differ depending upon domain? More importantly, is this potential difference subject to the moderating influence of meta-cognitive beliefs about self-attributes. Does this difference depend on whether self-attributes are perceived as modifiable? These are the issues with which our research is concerned.

We will begin by defining three motives that guide the self-evaluation process. We will proceed by providing a thumbnail review of the literature on these motives, in particular the literature that applies to the domains of feeling, thinking, and behaving. Next, we will single out a critical moderator, trait modifiability. Our subsequent task will be to identify missing pieces in the empirical puzzle linking the literature on (a) the three self-evaluation motives, (b) the three domains, and (c) perceived trait modifiability. Most importantly, we will describe an experiment that promises to supply these missing pieces.

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Self-Evaluation

Self-Evaluation Motives

The traditional viewpoint in social and personality psychology has been that the self-evaluation process is directed by three motives: self-enhancement, self-verification, and self-assessment' (Sedikides, 1993; Sedikides & Green, 2000; Pemberton & Sedikides, 2001).

Self-enhancement refers to strivings for positivity or the avoidance of negativity~2 The goal of the individual is to use new information (e.g., feedback) in such a way as to maximize the positivity of the self-concept or minimize its negativity (Campbell & Sedikides, 1999; Taylor & Brown, 1988). This goal is not necessarily compromised by the degree of feedback accuracy or by the strength of conviction with which self-beliefs are held.

Self-verification refers to strivings for consistency. The objective of the individual is to maintain a harmonious relation between well-founded self-beliefs and feedback (Swann, 1990; Swann, Rentfrow, & Guinn, in press). The individual will go to great lengths to uphold existing self-beliefs, regardless of whether these beliefs are positive or negative, and regardless of whether the accuracy of the self-beliefs can be augmented or reduced by the feedback.

Self-assessment refers to the pursuit of accuracy The individual is concerned with improving the accuracy of self-knowledge (Sorrentino & Hewitt, 1984; Trope, 1986). Whether positive versus negative self-views are at stake is inconsequential. Increments in the accuracy of self-views is the golden criterion by which the desirability of feedback is gauged.

1. The relevance of a fourth motive, self-improvement, has also been receiving increasing theoretical and empirical attention (Duval & Silvia, 2002; Sedikides, 1999; Sedikides & Strube, 1997; Sedikides & Skowronski, 2000).
2. We will use the term self-enhancement to mean both enhancement and protection, although we acknowledge the distinct motivational origins of the latter two processes (Elliot & Church, 1997; Rhodewalt, Morf, Hazlett, & Fairchild, 1991; Tice, 1991).

Self-Evaluation Motives: Divergent Effects on Feelings, Thinking, and Behaving

The first wave of research on self-evaluation has focused, justifiably so, on a "main effect model: Do self-evaluation motives have independent effects on human functioning? After it became clear that they do, researchers have redirected their attention to "interaction effect questions (Dauenheimer, Stahlberg, & Petersen, 1999; Sedikides & Strube, 1997; Staffiberg, Petersen, & Dauenheimer, 1999; Swann, 1990; Swann, Pelham, & Krull, 1989). One such question is whether the three motives exert a different influence on feeling, thinking, and behaving or intending to behave.

As far as attitudes or beliefs about external objects are concerned, these three domains have been conceptualized as relatively distinct by both philosophers (e.g., classical Greek, Hindu; see McGuire, 1985) and psychologists (Katz & Stotland, 1959; Rosenberg & Hovland, 1960; Triandis, 1971). These speculations were supported by empirical evidence (Kothandapani, 1971; Ostrom, 1969; but see Breckler, 1984), although calls have also been voiced for more parsimonious two-component (Bagozzi & Burnkrant, 1979) and even single-component (Dillon & Kumar, 1985) models.

This literature carried over to attitudes or beliefs about the self. Self-evaluation researchers have capitalized on the distinction between affective and cognitive responses (McFarlin & Blascovich, 1981; Moreland & Sweeney, 1984; Shrauger, 1975; Swann & Schroeder, 1995) and have established, through multivariate data analytic techniques (Dauenheimer *et al.*, 1999; Jussim, Yen, & Aiello, 1995; Swann, Griffin, Predmore, & Gaines, 1987; Staffiberg *et al.*, 1999; Sweeney & Wells, 1990), that the effects of self-evaluation motives differ depending on domain. The self-enhancement motive drives affective responding (e.g., mood states), whereas the self-verification motive drives cognitive responding (e.g., perceptions of feedback accuracy) (Arkin & Appelman, 1983; Dauenheimer *et al.*, 1999; Jussim *et al.*, 1995; Swann *et al.*, 1987; Sweeney & Wells, 1990).³ That is, individuals

3. Jussim, Yen, and Aiello (1995) showed that self-assessment concerns, along with self-verification concerns, influenced two additional classes of responses: how well participants evaluated their own performance, and how well participants expected to perform on the next test.

feel better after receiving favorable than unfavorable feedback, but they regard feedback consistent with their self-views (be it positive or negative) as more accurate than feedback inconsistent with their self-views.

The empirical landscape, however, has not been fully drawn in respect to the behavioral domain. To begin with, the relative independence of this domain from the affective and cognitive ones has not been established as far as self-beliefs are concerned. Also, it is not entirely clear how the motives play out in the behavioral domain. Some research finds that the self-assessment motive guides behavioral intentions (e.g., test preferences); in particular, participants favor the test that maximizes the diagnosticity of both their strengths and their weaknesses (Strube, Lott, LeXuan-Hy, Oxenberg, & Deichmann, 1986; Trope, 1980, 1982). Other research, however, reports that the self-enhancement motive directs behavioral intentions (Brown, 1990; Brown & Dutton, 1995; Cioffi, 1991), whereas still another line of research indicates that self-verification is the overriding motive (Swann & Read, 1981a, 1981b).

Trait Modifiability as a Moderator

The partial inconsistency of research findings concerning the relative prevalence of motives in the behavioral domain invites another "interaction effect" question, that of moderators (Sedikides & Strube, 1997). What variables determine which motive will guide behavioral intentions (and also feeling and thinking)? Is there a critical moderator that can account for seemingly unexplained sources of variation?

Keeping in pace with a recent wave of research, we are in a position to propose such a moderator. It is the perceived modifiability of self-conceptions, henceforth called trait modifiability Dweck and her colleagues (Dweck, 2000; Dweck & Leggett, 1988; Henderson & Dweck, 1990), for example, have shown that implicit theories of trait modifiability are associated with distinct judgmental and behavioral components, whereas Dunning (1995) demonstrated that trait modifiability moderates the emergence of self-enhancement versus self-assessment.

The Present Investigation

Contribution

The present investigation shares several similarities with past empirical forays. Like research by Jussim et al. (1995), Staffinberg et al., 1999, Swann et al. (1987), and Sweeney and Wells (1990), the present investigation is concerned with the relative prevalence of self-enhancement and self-verification strivings in affective versus cognitive responding. Like research by Dunning (1995), the present investigation is concerned with the relative prevalence of self-enhancement and self-assessment strivings in the behavioral domain. Also, like research by Dweck and colleagues (Dweck, 1991; Dweck & Leggett, 1988) and by Dunning (1995), the present investigation is concerned with the moderating role of trait modifiability.

At the same time, though, the present investigation makes several substantive contributions to the self-evaluation literature. First, the investigation seeks to validate behavioral responding as a relatively distinct domain from affective and cognitive responding. Additionally, the investigation enriches the current debate by exploring motive interplay on all three domains of human functioning simultaneously. Finally, and most importantly, the investigation examines whether trait modifiability moderates the emergence of motives in all three domains.

Hypotheses

In the reported experiment, participants rated the degree to which a given trait (i.e., assertiveness) described them, and also rated their perceived modifiability of assertiveness. After taking an alleged assertiveness test and receiving false (unfavorable or favorable) feedback, participants completed measures of affective, cognitive, and behavioral responding.

Affective responding. In line with past theorizing and research (Dauenheimer et al., 1999; Jussim et al., 1995; McFarlin & Blascovich, 1981; Moreland & Sweeney, 1984; Shrauger, 1975; Swann et al., 1987; Swann & Schroeder, 1995; Sweeney & Wells, 1990), we hypothesize that affective responding (i.e., subjective reports of mood states) will be influenced by the self-enhancement motive (*Hypothesis 1*). Participants will experience less

positive affect following unfavorable than favorable feedback. These affective reactions, however, will be moderated by trait modifiability (*Hypothesis 1a*). The rationale for our hypothesis is best illustrated in the case of unfavorable feedback. Participants who consider assertiveness unmodifiable will experience more negative affect than those who consider assertiveness modifiable; the former are entrapped into a trait attribute, whereas the latter have escaping routes. Favorable feedback may not induce equally powerful affective reactions, simply because it is non-threatening. Thus, participants will experience more positive affect after favorable feedback, regardless of whether they perceive assertiveness as modifiable or unmodifiable.

Cognitive responding. Based on previous work (Dauenheimer *et al.*, 1999; *jussim et al.*, 1995; *StahIberg et al.*, 1999; *Swarm et al.*, 1987; *Sweeney & Wells*, 1990), we hypothesize that cognitive responding (i.e., perceptions of feedback accuracy) will be driven by the self-verification motive (*Hypothesis 2*). Participants who describe themselves as assertive will consider favorable (i.e., consistent) feedback as more accurate than unfavorable (i.e., inconsistent) feedback, and vice-versa for participants who describe the selves as unassertive

More importantly, we hypothesized that trait modifiability moderates these responses. Cognitive responding will be influenced by the self-verification motive in the case of trait unmodifiability (*Hypothesis 2a*). For trait unmodifiable participants, assertiveness is a well-entrenched attribute, one they are destined to possess. These participants will be motivated, then, to maintain the existing status quo as it applies to the self. Participants who regard themselves as assertive will perceive favorable feedback as more accurate than unfavorable feedback (see also *Butler*, 2000). On the other hand, those participants who regard themselves as unassertive will judge unfavorable feedback as more accurate than favorable feedback. These individuals likely do not believe (at either an implicit or explicit level) **that they** are capable of changing and meeting new standards.

In the case of trait modifiability, however, we hypothesize that cognitive responding will be influenced by the self-enhancement motive (*Hypothesis 2b*). For trait modifiable participants, assertiveness is an attribute that is expendable and interchangeable. The latitude of changing this trait is quite broad. Thus, these par-

ticipants will use the perceived malleability of the trait as a selfenhancement strategy. Both participants who regard themselves as assertive and participants who regard themselves as unassertive will deem unfavorable feedback as less accurate than favorable feedback; after all, their failure is only temporary, as their level of assertiveness can be raised by expending a measure of effort.

Behavioral responding. In line with a good deal of past research (Strube *et al.*, 1986; Trope, 1980, 1982), we hypothesize that behavioral responding (information seeking, i.e., test preference ratings) will be directed by the self-assessment motive (*Hypothesis 3*). Participants will display stronger preferences for feedback-available tests than for feedback-unavailable tests. Nevertheless, we wish to acknowledge the tentative nature of this prediction, as evidence also favors the self-enhancement (Brown, 1990; Cioffi, 1991) and self-verification (Swann & Read, 1981a, 1981b) motives.

Behavioral responding is also assumed to be moderated by trait modifiability. Dunning (1995) manipulated trait modifiability in order to examine whether behavioral responding (i.e., information seeking) was influenced by the self-enhancement versus the self-assessment motive. In the case of participants who considered the relevant trait (i.e., integrative orientation) modifiable, responses were guided by the self-assessment motive. However, in the case of participants who considered integrative orientation unmodifiable (as well as important), responses were guided by the self-enhancement motive. Based on these findings, we hypothesize that test preferences will be mostly influenced by the selfassessment motive when participants consider assertiveness modifiable rather than unmodifiable (*Hypothesis 3a*).

Additionally, we investigated whether the self-verification motive will influence test preference ratings. If so, assertive participants

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will show stronger preferences for feedback-available tests following favorable than unfavorable feedback, whereas the reverse pattern will be observed for unassertive participants (*Hypothesis 3b*).

Method

Pilot Testing

We conducted two pilot studies. In the pilot studies, as well as in the experiment, participants were undergraduate students at the University of Marne-la-Vallée, France.

In Pilot Study 1, 101 volunteers (54 women, 47 men) were provided with 10 traits and were asked to rate on 11-point scales (a) the extent to which they possessed each trait (0 = *not at all*, 10 = *very much*), and (b) the extent to which they considered each trait modifiable (0 = *not at all modifiable*, 10 = *extremely modifiable*). Our intent was to select a single trait for use in the main experiment. This trait ought to satisfy two criteria. First, roughly an equal number of participants should report that they possessed the trait to either a low or high extent. Second, roughly an equal number of participants should rate the trait as either modifiable or unmodifiable. The trait assertiveness met these criteria best of all.

We conducted Pilot Study 2 in order to test whether participants in our population regarded the trait assertiveness as positive. Thirty-four volunteers (14 women, 20 men) rated assertiveness on an 11-point scale ranging from 0 (*negative*) through 5 (*neutral*) to 10 (*positive*). Indeed, participants regarded the trait assertiveness as positive ($M = 7.36$); their ratings differed significantly from the scale midpoint, $t(33) = 5.35, P < .001$.

Experiment

Participants and Experimental Design

One hundred forty-four paid volunteers (71 women, 73 men) were assigned randomly to the experimental conditions. (The payment was DM10 or approximately \$5.) The experimental design was a balanced 2 (trait level: low assertiveness, high assertiveness) \times 2 (trait modifiability: low modifiability, high modifiability) \times 2 (feedback type: unfavorable feedback, favorable feedback) between-participants factorial. Cell sizes ranged from 17 to 19.

Procedure

Upon arrival at the laboratory, participants learned that this was an experiment on assertiveness, defined as the characteristic of pursuing one's own ideas persistently and communicating them effectively. Participants were informed that two tests had been developed to measure assertiveness, and the experiment would involve a comparison of these tests.

Next, participants rated their assertiveness level on an 11-point scale ranging from 0 (*very low assertiveness*) to 10 (*very high assertiveness*). Participants who scored below the 41st percentile (0-5) were classified as low assertiveness, whereas those who scored above the 59th percentile (7-10) were classified as high assertiveness.

Participants then rated how modifiable they believed their assertiveness was on an 11-point scale ranging from 0 (*not at all modifiable*) to 10 (*extremely modifiable*). Participants scoring below the 40th percentile (0-5) were labeled as low modifiability, whereas those scoring above the 58th percentile (7-10) were labeled as high modifiability.

Subsequently, participants took the alleged assertiveness test. The test consisted of 20 behaviors, 10 of which were confirming and 10 were disconfirming of the trait assertiveness. These behaviors were selected from a larger pool of behaviors that four research assistants had previously generated. Examples of the selected assertiveness-confirming behaviors are: "I argue with others when I disagree with them;" "Usually, I manage to persuade others;" and "I defend my opinions, when necessary." Examples of the selected assertiveness-disconfirming behaviors are: "I give up when the discussion seems to turn into a serious argument;" "I am very considerate toward others and, as a result, I often lose sight of my own interests;" and "Usually, my group members ignore my opinions." Participants rated on 5-point scales (1 = definitely *not me*, 5 = definitely *me*) how well each behavior described them.

Upon test completion, the experimenter ostensibly graded the answers and provided participants with feedback. In the favorable feedback condition, participants were informed that their assertiveness level was high (i.e., they belonged to the top 15% of the population), and were also told that this was a good test.

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result. In the unfavorable feedback condition, participants were informed that their assertiveness level was low (i.e., they belonged to the bottom 30% of the population), and were also told that this was a bad test result. Immediately afterwards, participants completed a feedback manipulation check: They were asked to evaluate the feedback they received on a 7-point scale (1 = *negative*, 7 = *positive*). Next, participants completed the dependent measures.

Dependent Measures

Affective responding. We assessed affective responding through the Positive and Negative Affect Scales (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS consists of two 10-item scales that measure positive and negative affect. Both the positive and negative affect items exhibited high degrees of internal consistency (α s = .81 and .87, respectively).

Cognitive responding. We assessed cognitive responding through two single-item feedback accuracy measures: (a) "How accurate do you think your test score was?" (1 = *not at all accurate*, 7 = *extremely accurate*); and (b) "How accurate do you think other persons would regard your score?" (1 = *not at all accurate*, 7 = *extremely accurate*).

Behavioral responding. Participants made two ratings of test preferences. Participants were told that they would be given a second assertiveness test and that they could choose between two forms of this test. Form A was introduced as a newly developed version; because of lack of adequate validation, no feedback would ostensibly be available to participants. Form B was introduced as a fully validated version, so immediate and diagnostic feedback would be available. Participants indicated their preferences for each form (1 = *very low preference*, 7 = *very high preference*).

Finally, participants were probed for suspicion, were debriefed thoroughly, were paid, and were thanked and excused.

Results

Manipulation Check

Participants in the favorable feedback condition ($M = 5.77$) regarded the feedback as more positive than those in the unfavorable feedback condition ($M = 2.94$), $F(1, 136) = 345, p < .001$. The feedback manipulation was successful.

Factor Analysis

We entered all six dependent measures into a principal components factor analysis with varimax rotation. The factor analysis revealed an orthogonal, three-factor solution. Eigenvalues and factor loadings are displayed in *Table 1*. The first factor, labeled as *cognitive*, accounted for 30% of the variance and had an eigenvalue of 1.81. Both feedback accuracy measures loaded highly on this factor. The two PANAS scales (positive affect scale and negative affect scale) loaded highly on the second factor, which we labeled as *affective*. This factor accounted for 23.8% of the variance and had an eigenvalue of 1.43. Lastly, both test preference measures loaded highly on the third factor that explained 20.7% of variance and had an eigenvalue of 1.24. We labeled this factor as *behavioral*. All remaining eigenvalues were < 1 .

Taken together, the results of the factor analysis indicate that the cognitive measures were closely related to one another, but were relatively independent of the affective and behavioral measures. The affective measures were also closely related to one another,

Measures	Factor 1 (cognitive)	Factor 2 (affective)	Factor 3 (behavioral)
Feedback accuracy measures			
Perceived “own” test accuracy	.93	.12	.09
Perceived “other” test accuracy	.94	.10	-.04
Affect measures			
Positive affect items	.02	.86	.12
Negative affect items	-.02	-.71	.12
Test preference measures			
Form A (feedback-available test)	.11	.32	.78
Form B (feedback-available test)	.05	.28	.78

Table 1 Factor Loading of the Principal Components Factor Analysis with Varimax Rotation

Trait modifiability and trait level	Feedback type	
	Unfavorable feedback	Favorable feedback
Low modifiability		
Low assertiveness	-20	1.88
High assertiveness	.43	1.95
High modifiability		
Low assertiveness	.65	1.83
High assertiveness	.93	1.94

TABLE 2
Affective Reactions as a
Function of Trait
Modifiability Trait
Level, and Feedback
Type

Note: High scores indicate positive affect.

but were relatively independent of the cognitive and behavioral measures. Lastly, the behavioral measures were closely related to one another, but were relatively independent of the cognitive and affective measures. In summary, the factor analysis demonstrates the relative independence of the three self-evaluation domains.

Affective Responding

To simplify the presentation of the results, we subtracted the negative from the positive affect component (for similar procedures, see Martin, Abend, Sedikides, & Green, 1997). Separate analyses for each component yielded conceptually identical results. We display the means in *Table 2*.

Motive interplay. We hypothesized that affective reactions will be governed by the self-enhancement motive (*Hypothesis 1*). This hypothesis was confirmed. Participants who received unfavorable feedback ($M = .45$) experienced less positive affect than those who received favorable feedback ($M = 1.90$), feedback type main effect $F(1, 136) = 111, p < .001$. Importantly, the self-verification motive did not influence affective responding, feedback type X trait level interaction $F(1, 136) = 1.79, p < .19$; that is, the feedback elicited similar affective experiences among low and high assertiveness participants.

The moderating role of trait modifiability. Our key hypothesis was that the above main effect would be qualified by the feedback type x trait modifiability interaction (*Hypothesis 1a*). This hypothesis was also confirmed, interaction $F(1, 136) = 6.64, p < .01$. In the case of unfavorable feedback, low modifiability participants

TABLE 3
Perceived Feedback
Accuracy as a
Function of Trait
Modifiability, Trait
Level, and Feedback
Type

Trait modifiability and trait level	Feedback type	
	Unfavorable feedback	Favorable feedback
Low modifiability		
Low assertiveness	4.25	3.03
High assertiveness	1.92	5.78
High modifiability		

($M = .12$) experienced less positive affect than their high modifiability counterparts ($M = .79$), $t(70) = 3.00$, $p < .01$; in the case of favorable feedback, however, low ($M = 1.92$) and high ($M = 1.89$) modifiability participants did not differ significantly in degree of experienced affect, $t(70) = .21$, $p < .84$. This pattern generalized across trait level, triple interaction $F(1, 136) = .54$, $p < .47$.

Cognitive Responding

We averaged responses to the two items that measured feedback accuracy and formed a single index ($\alpha = .86$). We display the means in *Table 3*.

Motive interplay. Participants who received unfavorable feedback ($M = 2.97$) perceived the feedback as less accurate than those who received favorable feedback ($M = 4.78$), feedback type main effect $F(1, 136) = 137$, $p < .001$. This finding, which is in line with the self-enhancement perspective, was qualified by the feedback type X trait level interaction, $F(1, 136) = 161$, $p < .001$. Perceptions of unfavorable ($M = 3.93$) and favorable ($M = 3.78$) feedback accuracy did not differ among low assertiveness participants, $t(70) = .58$, $p < .57$; however, these perceptions differed among high assertiveness participants. The latter individuals regarded unfavorable feedback ($M = 2.02$) as less accurate than favorable feedback ($M = 5.78$), $t(70) = 18.27$, $p < .001$.

We hypothesized that cognitive responding will be driven by the self-verification motive (*Hypothesis 2*). The interaction results are partially supportive of this hypothesis. Cognitive responding was driven only in part by self-verification, given that low assertiveness participants did not evaluate unfavorable feedback as more accurate than favorable feedback. A similar pattern has someti-

mes been obtained in the literature (Crary, 1966; Korman, 1968; Shrauger & Lund, 1975). Fortunately, however, the picture becomes less ambiguous with the addition of trait modifiability.

The moderating role of trait modifiability. We hypothesized (*Hypothesis 2a*) that the cognitive responding in the case of high modifiability participants is guided by the self-enhancement motive, whereas it is guided by the self-verification motive in the case of low modifiability participants. The triple interaction was indeed significant, $F(1, 136) = 14.30, p < .001$. We decomposed this interaction through the two trait level X feedback type interactions

corresponding to the low and high modifiability participants.

First, we report the results for low modifiability participants. In support of *Hypothesis 2a*, these participants' perceptions of feedback accuracy were guided by the self-verification motive, feedback type X trait level interaction $F(1, 68) = 179, p < .001$ (Table 3, top panel). High assertiveness participants regarded favorable feedback as more accurate than unfavorable feedback, $t(34) = 15.82, p < .001$, whereas low assertiveness participants regarded unfavorable feedback as more accurate than favorable feedback $t(4) = 4.01, p < .001$.

Next, we report the results for high modifiability participants. The feedback type X trait level interaction was significant, $F(1, 68) = 39.85, p < .001$ (Table 3, bottom panel). High assertiveness participants regarded favorable feedback as more accurate than unfavorable feedback $t(34) = 10.86, p < .001$; low assertiveness participants, however, also manifested a weaker but reliable tendency to regard favorable feedback as more accurate than unfavorable feedback $t(34) = 2.71, p < .01$. These empirical patterns are generally in line with the self-enhancement perspective (*Hypothesis 2b*).

Behavioral Responding

Participants rated their preferences for each of two available test forms that they could ostensibly take. These preference scores were submitted to a 2 (feedback type) x 2 (trait modifiability) x 2 (trait level) x 2 (feedback availability) mixed ANOVA with the first three factors being between-participants and the last factor being within-participants. We display the means in Table 4.

Motive interplay. We hypothesized that test preferences will be

TABLE 4
 Test Preferences as
 a
 Function of Trait
 Modifiability, Trait
 Level, and
 Feedback
 Type

Trait modifiability, trait level and feedback availability	Feedback type	
	Unfavorable feedback	Favourable feedback
Low modifiability		
• High assertiveness		
Available feedback	4.78	5.17
Unavailable feedback	4.72	4.94
Difference	.06	.23
• Low assertiveness		
Available feedback	4.61	4.89
Unavailable feedback	4.56	4.61
Difference	.05	.28
High modifiability		
• High assertiveness		
Available feedback	5.56	6.22
Unavailable feedback	4.06	4.67

guided by the self-assessment motive (Hypothesis3). The predicted feedback availability main effect was significant. Participants manifested higher preferences for feedback-available tests ($M = 5.34$) than for feedback-unavailable tests ($M = 4.59$), $F(1, 134) = 14.03, p < .001$.

The moderating role of trait modifiability. The above main effect was qualified by trait modifiability. We hypothesized that test preferences are more strongly affected by the self-assessment motive when participants regard assertiveness as modifiable than unmodifiable (Hypothesis3a). This hypothesis was confirmed, as revealed by a significant trait modifiability x feedback availability interaction, $F(1, 134) = 8.87, p < .01$. High modifiability participants reported a higher preference for feedback-available tests ($M = 5.82$) than feedback-unavailable tests ($M = 4.48$), $t(71) = 4.93, p < .001$. In contrast, low modifiability participants did not differ in their preferences for feedback-available ($M = 4.86$) or feedback-unavailable ($M = 4.71$) tests, $t(71) = .55, p > .59$. Parenthetically, a non-significant trait level X feedback type interaction, $F(1, 134) = .92, p > .47$, and a non-significant trait level X

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test availability x feedback type interaction, $F(1, 134) = .17, P < .69$, indicated that the self-verification motive did not guide test preferences and could be ruled out as an alternative explanation,

Discussion

Summary of Findings

The present investigation focused on the interplay among self-enhancement, self-assessment, and self-verification in the affective, cognitive, and behavioral domains. Most importantly, the investigation examined the role of a critical moderator in the self-evaluation process. Does trait modifiability moderate the emergence of motives in each domain?

The self-enhancement motive guided affective responding, but these responses were moderated by trait modifiability. Participants who received unfavorable feedback regarding possession of the trait assertiveness experienced less positive affect than those who received favorable feedback, but this was especially true for participants who considered assertiveness a rather unmodifiable trait. The self-verification motive appeared to guide cognitive responding only partially. The degree to which participants judged feedback as accurate or inaccurate depended, in part, on whether the feedback was consistent with their pre-existing self-views. Participants who thought of themselves as assertive judged favorable (i.e., consistent) feedback as more accurate than unfavorable (i.e., inconsistent) feedback; however, participants who thought of themselves as unassertive did not judge favorable and unfavorable feedback differentially.

This pattern, though, was contingent on whether participants viewed the trait assertiveness as modifiable or unmodifiable. The cognitive responding of participants who viewed assertiveness as an unmodifiable attribute was guided by the self-verification motive. Participants who considered themselves assertive judged favorable feedback as more accurate than unfavorable feedback, whereas those who considered themselves unassertive judged unfavorable feedback as more accurate than favorable feedback. In contrast, the cognitive responding of participants who viewed assertiveness as a modifiable attribute were guided by the self-

enhancement motive. Both, participants who considered themselves assertive and participants who considered themselves unassertive judged favorable feedback as more accurate than unfavorable feedback.

The self-assessment motive drove behavioral responding. Indeed, participants selected tests for which accurate feedback would ostensibly be available as opposed to tests for which feedback would be unavailable. This pattern of behavioral responding, however, was particularly evident in participants who considered their assertiveness modifiable. Clearly, test selection behavior was also moderated by trait modifiability

Implications

The findings have several implications for the self-evaluation literature. To begin with, the findings highlight the dynamic interplay between self-evaluation motives (Sedikides & Strube, 1995, 1997). Motives are neither activated nor operate in isolation. Instead, they have a synergistic relation - sometimes competitive, other times symbiotic. Motives can be activated differentially as a function of self-evaluative domains.

In the present research we investigated three self-evaluative domains, the affective, cognitive, and behavioral ones. Shifts in self-evaluative domains were accompanied by differential activation of self-evaluation motives. This pattern attests to the flexibility, adaptiveness, and pragmatic nature of the human self-evaluation process (Sedikides, Campbell, Reeder, & Elliot, 2002; Sedikides & Strube, 1997).

Remarkably, these changes in motive configuration as a function of self-evaluative domain were not random. Rather, they were systematic. The catalyst in understanding transformations in motive configuration is trait modifiability. Which motive will be activated and subsequently guide the self-evaluation process depends not only on domain but, most importantly, on whether the evaluated self-beliefs are perceived as modifiable or not.

Our findings reinforce the notion that perceived modifiability of self-views is at the center not only of the self-evaluation process (Butler, 2000; Dunning, 1995; Dweck & Leggett, 1988) but also of person perception (Levy & Dweck, 1998), including perception of romantic partners (Ruvolo & Rotondo, 1998). Additionally, this

variable has been shown to make a difference when task performance is at stake (Butler, 2000; Henderson & Dweck, 1990; Jones, Slate, Marini, & DeWater, 1993; Koestner, Aube, Ruttner, & Breed, 1995). Trait modifiability reflects fundamentally the way individuals view the self or others and the way in which individuals behave toward the self or others.

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