Upward Self-Revision: Constructing Possible Selves

Patrick J. Carroll

The Ohio State University–Lima

This research examined how and when people engage in upward self-revision to embrace new possible selves in response to social validation. First, the present study ($n = 67$) predicted and found that upward self-revision was more likely to occur when validations fully specify the meaning of the positive discrepancy between the desired self and the alternative self into the explicit prospect of the desired self as more likely to occur. Second, initial elevations in self-confidence mediated the effect of social validations on possible selves. The discussion focuses on implications and future directions of the present work.

Possible selves are the mental representations of one's hopes and fears; they are personalized goal representations of the self in desired or undesired future end states (Markus & Ruvolo, 1989). Although possible selves exist only in the mind's eye, they provide very real adaptive benefits: (a) standards for evaluating present selves and (b) powerful incentives that motivate action around their pursuit and acquisition (Oyserman, Bybee, & Terry, 2006; Ruvolo & Markus, 1992). Despite these benefits, people sometimes do change, or revise, possible selves to abandon (downward self-revision) or embrace (upward self-revision) commitment to a possible self. Like most things, different conditions within the self or social environment may initiate these revisions. For example, a student may decide to revise a possible self on her own because she feels it is the right thing to do or because she feels pressure to do so by others, such as parents, teachers, or peers.

Although other models have focused on self-initiated revisions (Oettingen & Kappes, 2009), this article focuses on *socially* initiated revisions of possible selves. Recent research has already shed some light on how (process by which) and when (conditions under which) people engage in downward self-revision to abandon a possible self in response to social threat. Carroll, Shepperd, and Arkin (2009) showed that participants

were more likely to abandon possible selves when an evaluator highlighted the threatening consequences of participants pursuing their dreams. Specifically, when participants were forced to consider the vivid prospect of an undesired self as being more likely than a desired self, they were ready revise their possible selves. Regarding how, rising anxiety transformed the initial doubt evoked by threats into the fall of expectations supporting commitment to possible selves. Although promising, this past work does not address how and when upward self-revision occurs. Thus, the present work addresses how and when upward self-revision unfolds in response to social validation.

THE "WHEN" QUESTION: THE CONDITIONS OF UPWARD SELF-REVISION

Upward self-revision is unlikely to occur when evaluators simply highlight a desired discrepancy between an individual's present standing and some external standard.[1] For example, a young woman is unlikely to embrace the pursuit of psychology when a professor merely points out that her grade point average (GPA)

---

[1]It is important to distinguish (a) socially presented discrepancies from (b) self-represented discrepancies (e.g., Higgins, 1987). For example, Oettingen (Oettingen et al., 2001) focused on self-initiated goal revisions when people mentally contrast *self-representations* of present and desired goal reality. By comparison, this model focuses on revisions in response to *socially presented* contrasts or discrepancies between present and desired goal reality.

Correspondence should be sent to Patrick J. Carroll, Department of Psychology, The Ohio State University–Lima, 430C Galvin Hall, 4240 Campus Drive, Lima, OH 45804. E-mail: carroll.279@osu.edu

exceeds that required for admissions into most graduate psychology programs. However, all discrepancies, even desired ones, are still raw feedback that have no inherent meaning and, thus, must be construed to determine meaning. For example, the student whose GPA exceeds some desired GPA threshold for graduate admissions must still determine whether that means she should (a) just consider it as one of many viable career possibilities or (b) give up all other career possibilities to embrace the exclusive pursuit of psychology.

I propose that upward self-revision is more likely when evaluators fully specify the meaning or implications of a desired discrepancy. Specifically, it should occur when evaluators make clear that the desired discrepancy *means* that the explicit prospect of a new desired self is more likely to occur than failure. So, when a student who plans to pursue marketing learns that she exceeds entrance requirements for clinical psychology (desired discrepancy), she will be more likely to change her career goals if she also learns that it *means* she will be more likely to succeed to become a top clinical psychologist in Boston than fail if she does pursue psychology.

The specification of evaluative feedback increases the likelihood of upward self-revision by "going beyond the information given" (raw discrepancies) to connect (a) the actor's present choices to embrace a possible self to (b) the vivid *future* consequences of those choices. The importance of specifying an explicit description of the general desired self is illustrated by past work on intuitive belief representation. Support theory suggests that *expectancy beliefs* are attached not to abstract and general event possibilities but, instead, to explicit and specific descriptions of event possibilities called *hypotheses* (Rottenstreich & Tversky, 2002; Tversky & Koehler, 1994). Moreover, expectations for event hypotheses are assessed in relative not absolute terms of *perceived support* for a focal hypothesis (desired self) versus alternative ones (undesired self).

Of importance, perceived support depends not on *actual* evidence but, rather, on the *explicitness of description* of that evidence (Rottenstreich & Tversky, 1997). Support *increases* by unpacking, or *specifying*, a general event hypothesis into its specific outcome scenarios and decreases by unpacking the alternative event hypothesis into its specific outcome scenarios (Carroll et al., 2009; Koehler, 1991). For example, perceived support increases by unpacking the general prospect of becoming a psychologist into the explicit scenario of the student building a top Boston practice after earning a doctorate from Harvard. Conversely, it decreases by unpacking the alternative possibility of failure into the explicit scenario of the student becoming a store clerk after giving up other career possibilities to continue and fail in the unrealistic pursuit of psychology (Rottenstreich & Tversky, 1997).

Two factors account for the increase in support produced by *unpacking* an overall event (Tversky & Koehler, 1994). The first factor is *memory limitation* as judges may not be able to recover all relevant cases in the event category even if they can recognize them without error when presented. Thus, unpacking an overall future event (death by unnatural causes) into its explicit outcome scenarios (car accident, drowning, etc.) may simply *remind* people of specific possibilities that may have otherwise slipped their minds. The second factor is *imagery tuning*: Unpacking a general event into an explicit outcome scenario calls people's attention to specific aspects of the event possibility, thereby increasing the salience and clarity of certain aspects of the image over others. Of importance, this second effect is independent of the first (memory limitation) as it can occur even when *no new information* comes to mind from memory.

We can draw a few important connections at this point between support theory and prior work on possible selves. First, the concept of *perceived support* corresponds with *confidence* in possible self-expectations. Second, support theory can situate socially induced change in possible selves as just one particular form of socially induced changes in mental representations.

Applied to *validation*, for example, support theory suggests that evaluators can increase the likelihood of upward self-revision by unpacking or specifying the implications of the desired discrepancy into an explicit description of *exactly* what the student will become as a successful clinical psychologist. When a *specific* desired self is unpacked and fit to the specific *desired* evidence, the student experiences rising confidence as her once vague and abstract desired self suddenly springs to life with concrete details that she may not have otherwise thought or dared to consider (Tversky & Koehler, 1994). Once considered, though, natural availability mechanisms sharply enhance the salience of explicit details unpacked in the specific desired image (becoming a successful clinical psychologist in Boston after graduating from Harvard; Tversky & Koehler, 1994). Moreover, as the strength of support for the desired self-hypothesis rapidly increases, the strength of support for the countervailing *undesired self*-hypothesis rapidly diminishes (Rottenstreich & Tversky, 1997). Ultimately, the increasingly salient desired self inspires enough self-confidence to prompt the student to forego other career options to embrace the pursuit of psychology.

THE "HOW" QUESTION: THE PROCESS OF UPWARD SELF-REVISION

Although affect and expectations play a central role in downward self-revision, they may play a lesser role

in the process of upward self-revision due to the importance of the link between counterfactual emotions (e.g., disappointment, elation) and expectancy-violations (see Carroll, Sweeny, & Shepperd, 2006). Past work shows that desired selves are typically supported by optimistic expectancy beliefs (Atkinson & Birch, 1970). That is, because people generally plan to succeed not fail, they tend to pursue desired selves supported by positive expectations rather than wild fantasies that they desire but never expect to attain (Markus & Ruvolo, 1989).

This would suggest that the effect of social feedback depends upon its implications for the validity of the positive expectations that typically support possible self-pursuits. In the work on downward self-revision, anxiety increased when specified threats diminished confidence by suggesting a vivid *negative* prospect of disappointment that would arise when the student's positive expectations were ultimately *disconfirmed* by inevitable failure (Carroll et al., 2009). However, the anticipated *confirmation* of positive expectations suggested by validations should not evoke the same hot affective reactions and expectancy changes in upward self-revision that were evoked in downward self-revision by the anticipated *disconfirmation* of those expectations suggested by threat.

Of note, even if validations typically confirm rather than change already positive expectations, I propose that they should (a) change confidence in those expectations and, in turn, (b) those confidence changes should mediate the process of upward self-revision. Self-confidence is a metacognitive experience of certainty in the validity of cognitive self-beliefs, including self-expectancies (Briñol, DeMarree, & Petty, 2010). Of importance, prior work suggests that confidence can vary over time independently of the positivity–negativity of the cognitive belief it is attached to (Briñol et al., 2010; Carroll et al., 2009). For example, even if self-expectations remain optimistic, one's confidence in those expectations can rise or fall in response to new validations or threats.

Beyond evidence that confidence can *vary* independently of expectancy beliefs, persuasion research suggests that *enhanced confidence* should *mediate* the link between attitudes and behavior. Specifically, this work suggests that accessibility of attitude beliefs (e.g., expectations) enhances *meta-attitudinal* confidence or certainty, which in turn ultimately translates (a) enhanced attitude accessibility into (b) enhanced attitude-consistent behavior (Holland, Verplanken, & van Knippenberg, 2003). Although attitude principles have been applied to self-constructs (e.g., Rosenberg's self-esteem measure), persuasion research has also cast possible selves as attitude representations supported by cognitive expectancy beliefs about oneself in the future (Briñol et al.,

2010). Moreover, it suggests that the confidence in self-expectancy beliefs can change over time and, in turn, mediate the effect of possible self-attitudes on subsequent behavior. Thus, persuasion research (Briñol et al., 2010; Holland et al., 2003) does suggest that *rising* confidence should provide an important proximal mediator that turns (socially or self-) (a) enhanced accessibility of possible self-expectations into (b) enhanced commitment.

Prior self-research also suggests that self-confidence changes should mediate self-changes just as it mediates attitude change in response to evaluative feedback (e.g., Hermann, Leonardelli, & Arkin, 2004). For example, several studies found that rising doubt or falling confidence in beliefs supporting self-evaluations *mediates* the effect of threat on self-evaluative changes (Briñol et al., 2010; Briñol & Petty, 2003; Briñol, Petty, & Wheeler, 2006). And, as noted earlier, Carroll et al. (2009) showed that falling confidence was the primary mediator of threat on the downward revision of possible selves. As with downward self-revision, upward self-revision begins when social feedback initially changes one's certainty in the expectations supporting possible self-commitment. Despite their common origin in initial certainty changes, upward and downward self-revision still differ in one important way, namely, the direction and downstream processes initiated by those initial certainty changes. Whereas falling confidence initiated downward self-revision by weakening the expectancy support, rising confidence should initiate upward self-revision by strengthening the positive expectation supporting commitment to a new possible self. Taken together, persuasion and self-research converge to support elevations in confidence as the mediating link from social validations to upward self-revision.

EMPIRICAL OVERVIEW AND HYPOTHESES

The present research tests how and when people engage in upward self-revision to embrace commitment to a new possible self in the face of social validations. This study tracked the effect of validation specificity on behavioral commitment as well as intentions and other potential mediators of self-confidence, excitement, and expectations across three time points. Changes between Times 1 and 2 are called *initial* changes, and changes between Times 2 and 3 are called *ultimate* changes. H1 predicted that initial elevations in self-confidence would occur only when validations fully specified the implications of a desired discrepancy for participants. H2 also predicted that ultimate intention changes and higher behavioral commitment would occur only in response to fully specified validations. It is important to note

that H3 predicted that initial confidence elevations would mediate the total effect of specified validations on ultimate commitment.[2]

METHOD

Design

The present study adapted a paradigm developed to study downward self-revision in response to social threat (Carroll et al., 2009). However, to test the effect of validations, the direction of the feedback manipulation was changed to vary the specificity of desired rather than undesired discrepancies. Participants were randomly assigned to one of four conditions of validation specificity: control, unspecified, partially specified, and fully specified. This yielded a 4×3 mixed-model factorial design with validation specificity (control, unspecified, partially specified, fully specified) as the between-subjects factor crossed with time of measurement (Times 1–3) as the repeated measures factor.

Participants and Procedure

Sixty-seven undergraduate students (73% female) enrolled in upper division business and psychology classes participated in this study for extra credit. Students who volunteered for this study signed up to meet with a career advisor to learn about a new master's program in business psychology being developed at their university as an alternative to traditional graduate training program. When participants arrived, a researcher posing as a secretary provided them with the brochure (see Carroll et al., 2009, for brochure) for a 12-month master's program in Business Psychology. To prompt some initial commitment to the "business psychology" possible self, the secretary instructed them to "look over the brochure and consider the possibility of building a career in business psychology before meeting with a career advisor."

After 3 min, the secretary asked participants to complete a career inventory assessing their academic record and career goals so that the advisor could evaluate his or her prospective eligibility for the program. The inventory assessed critical baseline measures by asking participants to rate their current level of self-confidence ("At this moment, I feel certain of my abilities to become a business psychologist": 0 = *strongly disagree*; 4 = *strongly agree*), excitement ("How excited are you

about your career future in business psychology": 0 = *not at all excited*; 4 = *extremely excited*), and expectations (from 0% to 100%) for program admission as well as intentions to apply (1 = *definitely not*; 5 = *definitely*). The inventory also asked participants to report their cumulative GPA. Upon completion, the secretary left the room to fetch the career advisor and, once outside, checked the participant's self-reported GPA and selected an eligibility insert indicating either no GPA requirement (control condition) or a requirement .10 below the participant's GPA (validation conditions).

Another 3 min later, a second experimenter posing as the career advisor entered and executed the manipulation of validation specificity by addressing the GPA requirement. In the control condition, the advisor explained that they were still gathering data on the average GPA at the participant's university and would not set a GPA requirement until the next term. In the unspecified validation condition, the advisor pointed out the desired discrepancy by noting that the participant's GPA exceeded the minimum required GPA by a full tenth of a point. In the partially specified validation condition, the advisor pointed out the discrepancy but also partially specified its implications into the explicit prospect the undesired self as unlikely by stating that the participant was exactly what they were looking for and was unlikely to be rejected if he or she applied.

The fully specified condition was identical to the partially specified validation condition in that the advisor presented the desired discrepancy and then went further to partially specify its meaning into the prospect of undesired self as unlikely based on that discrepancy. However, in the fully specified validation condition, the advisor went even further to fully specify the meaning or, ultimate implications, of the validating discrepancy. Specifically, the advisor indicated that the participant was more likely to be accepted with full funding and excel throughout the program to ultimately graduate with numerous high-level job prospects in business psychology. The advisor explained that the program had an excellent placement record at other schools where qualified students, like the participant, were admitted with full funding and, in turn, could focus and excel in the program to ultimately end up in high-paying positions in business psychology.

Next, the advisor asked that participants to complete the second inventory, which asked them to repeat the critical measures. Once completed, the advisor reviewed campus career advising offices and then explained that he or she must leave to prepare for the next appointment. Five minutes later, the secretary reentered and asked participants to complete the measure of behavioral commitment and the exit inventory of critical self-report measures.

---

[2]The inclusion of Time 3 allows the test of two complementary predictions concerning the when confidence changes *do* and *do not* mediate the process. First, I predict that initial confidence elevations *will* mediate the effect of validation on behavioral commitment but, second, ultimate confidence elevations *will not* mediate the effect.

Unlike the inventory, the final measure of behavioral commitment gave participants the opportunity to *actually* apply to the program. The behavioral commitment index ranged from 0 (participants' declining any program information or materials to take home) to 1 (taking a brochure or business card) and 2 (request for an application to fill out at home), through to 3 (actually submitting an application with a $25 application fee). Finally, all participants were debriefed and asked permission to use their data before leaving the session.

RESULTS

Preliminary Analyses

Preliminary analyses showed no significant interactive effects of participant GPA or sex with validation specificity on the critical dependent measures, all Fs(7, 60) < 1.83, all ps > .15, all ds < .45. As such, all subsequent analyses exclude GPA and sex.

Testing Experimental Effects

Table 1 summarizes the means of all self-report variables for all three time points. Figure 1 summarizes medians on behavioral commitment at the final time point. First, excitement did not vary over time or between conditions, all Fs(6, 128) < .60, p > .44, all ds < .27, suggesting that positive affective experiences would not be involved in upward self-revision. But as predicted, there was a significant Validation Specificity × Time interaction across self-confidence, expectations, and (commitment) intentions at Time 1 to 3, all Fs(6, 128) > 3.01,
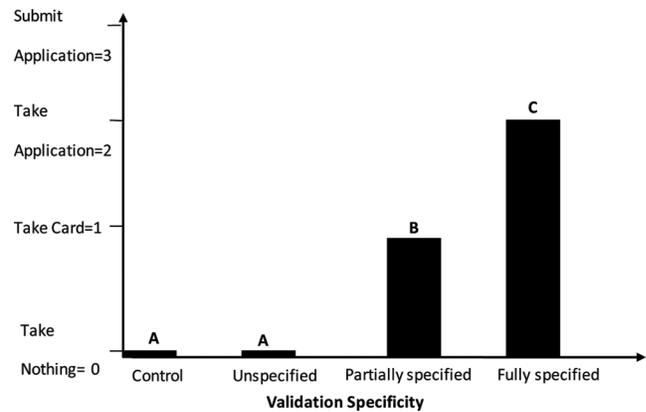

FIGURE 1   Median values of behavioral commitment across conditions of validation specificity. *Note.* Bars with different letters differ at $p < .05$.

all ps < .05, all ds > .59. Although no differences emerged at Time 1, all Fs(3, 64) < 1.63, all ps > .19, all ds < .43, significant differences did emerge across conditions in confidence and expectations at Time 2, both Fs > 4.79, ps < .05, ds > .73. In addition, the significant differences in self-confidence and expectations extended from Time 2 to Time 3 across conditions, Fs(3, 64) > 5.10, ps < .05, ds > .75. Moreover, at Time 3, significant differences emerged across conditions in intentions, F(3, 64) = 5.06, $p < .003$, $d = .78$.

Because behavioral commitment had only ordinal measurement levels, the analysis of experimental effects on this dependent variable required ordinal logistic regression. Experimental conditions were dummy-coded such that the fully specified condition was contrasted against all other conditions. Validation specificity had

TABLE 1
Self-Confidence, Expectations, Commitment, and Excitement as a Function of Validation Specificity

	Control M (SD)	Unspecified Validation M (SD)	Partially Specified Validation M (SD)	Fully Specified Validation M (SD)
Self-confidence				
Time 1	2.3 (0.9)$_a$	2.7 (0.9)$_a$	2.6 (0.7)$_a$	2.2 (0.9)$_a$
Time 2	2.5 (1.2)$_a$	2.9 (0.8)$_a$	3.1 (0.7)$_a$	3.8 (0.6)$_b$
Time 3	2.2 (1.2)$_a$	2.8 (0.9)$_a$	3.1 (0.7)$_a$	3.7 (0.6)$_b$
Excitement				
Time 1	2.8 (0.9)$_a$	2.8 (0.7)$_a$	2.8 (0.9)$_a$	2.7 (0.8)$_a$
Time 2	3.0 (0.9)$_a$	2.9 (0.8)$_a$	3.0 (0.8)$_a$	2.9 (1.0)$_a$
Time 3	3.1 (0.8)$_a$	3.1 (0.8)$_a$	3.3 (0.9)$_a$	3.0 (1.3)$_a$
Expectations				
Time 1	57.0 (24.8)$_a$	57.4 (22.2)$_a$	61.2 (20.7)$_a$	60.1 (16.9)$_a$
Time 2	63.0 (23.6)$_b$	75.6 (15.9)$_b$	83.8 (12.6)$_b$	79.1 (16.7)$_b$
Time 3	63.9 (22.5)$_b$	75.3 (15.2)$_b$	83.6 (12.6)$_b$	83.9 (12.6)$_b$
Intentions				
Time 1	2.7 (1.0)$_a$	2.9 (1.0)$_a$	2.9 (1.1)$_a$	3.0 (0.8)$_a$
Time 2	3.4 (0.9)$_b$	4.4 (1.5)$_b$	4.1 (1.5)$_b$	4.1 (1.4)$_b$
Time 3	3.3 (1.3)$_b$	4.5 (1.4)$_b$	4.0 (1.4)$_b$	4.9 (1.1)^c

Note. For self-report measures, means within columns with different subscripts differ at $p < .05$.

a significant overall effect on behavioral commitment, Wald $\chi^2 = 23.77$, $p < .001$. Compared to the fully specified condition, participants in all other validation conditions were more likely to endorse lower levels of behavioral commitment, all bs > 1.04, all Wald $\chi^2 > 4.84$, all ps $< .02$. Additional tests established that levels of behavioral commitment in the three lower specificity conditions did not differ from each other, all bs $< .95$, all Wald $\chi^2 < 3.24$, all ps $> .07$.

Testing the Mediation Effect

To evaluate key hypotheses (H1–H3), regression was used to first establish the effect of validation specificity on initial confidence changes, behavioral commitment, and ultimate intention changes. In a second step, a mediation analysis tested for the presence of an indirect effect, implying that the effect of validation specificity on ultimate intention changes and behavioral commitment would diminish once initial confidence elevations were included in the model.

To examine expected differences between experimental conditions, a dummy variable was used in which the three lower specificity conditions were coded as 0 and the fully specified condition coded as 1. Regression analysis showed that greater initial confidence changes occurred in the fully specified condition than in the remaining three conditions ($b = 1.37$, $SE = .22$, $p = .001$). Regression analysis also determined that the change in ultimate intentions was greater in the fully specified condition compared to the combined three conditions ($b = .29$, $SE = .09$, $p < .01$). The mediation analysis was carried out using Hayes's (2013) PROCESS macro, which relies on a bootstrapping approach to avoid bias in the estimation of indirect effects. As predicted, based on 10,000 resamples, the confidence interval of the bootstrapped coefficient *did not* include 0, ab $= .115$, 95% CI [+.008, +.300]; hence, the indirect effect *was* statistically significant. Because the effect of specificity also dropped to nonsignificance in this analysis ($b = .15$, $SE = .11$, $p = .20$), with initial confidence changes being the only significant predictor of ultimate intention changes ($b = 1.25$, $SE = .09$, $p < .01$), the present pattern indicated full mediation.

A similar approach was used in the analysis of the effects of specificity, though the nature of the behavioral commitment variable required again the use of ordinal logistic regression. Similar to what was just reported, behavioral commitment varied as a function of the contrast between the fully specified condition and the three less specified conditions ($b = 3.27$, $SE = .71$, Wald $\chi^2 = 21.12$, $p < .0001$). However, when initial confidence changes were introduced in analysis, it became the only reliable predictor of behavioral commitment ($b = 1.78$, $SE = .41$, Wald $\chi^2 = 17.22$, $p < .001$). At the same time,

validation specificity as a significant predictor of behavioral commitment was reduced to a statistical trend ($b = 1.04$, $SE = .77$, Wald $\chi^2 = 3.94$, $p > .06$). Although a direct test of the indirect effect was not possible, this pattern is at least consistent with the notion that initial confidence elevations are responsible for subsequent behavioral commitment to a promising career path. Overall, these analyses support that initial confidence elevations promote the upward revision of possible selves, assessed here as increases in the intent and behavioral commitment to pursue a new career.[3]

Alternative Models

Additional analyses showed that substituting alternative mediators for the proposed mediator did not reduce the significant effect of specificity. Unlike initial confidence elevations, baseline confidence and excitement as well as initial excitement changes, ultimate expectancy, and confidence changes *did not* reduce the significant effect of specificity on ultimate intention elevations (all bs $> .27$, all ts > 3.13, all ps $< .003$). Moreover, they did not reduce the significant effect of specificity on behavioral commitment ($b = 3.25$, $SE = .74$, Wald $\chi^2 = 19.10$, $p < .001$). Finally, none of these alternatives were reliable antecedents of ultimate intention elevations (all bs $< .36$, all ts $< .19$, all ps > 22) or behavioral commitment (all bs $< .55$, all Wald $\chi^2 < .98$, all ps $> .32$). Moreover, based on 10,000 resamples, the confidence intervals of the bootstrapped coefficients included zero for baseline confidence (ab $= .004$), 95% CI [–.002, +.006]; baseline excitement (ab $= .001$), 95% CI [–.018, +.038]; initial excitement changes (ab $= .001$), 95% CI [–.051, +.021]; ultimate expectancy changes (ab $= .001$), 95% CI [–.021, +.060]; and ultimate confidence changes (ab $= .002$), 95% CI [–.022, +.053]. Hence, unlike initial confidence elevations, these indirect effects *were not* statistically significant.

DISCUSSION

These findings support the present hypotheses regarding how and when people embrace commitment to a new possible self in response to social validations. As predicted, participants were more likely to embrace

---

[3]Additional evidence that self-confidence changes are instrumental in mediating the effect of validation specificity to increase behavioral commitment can also be gleaned by showing that the size of the correlation between self-confidence (T1–T2) changes and behavioral commitment increases at higher levels of validation specificity. Consistent with this prediction, the correlation between confidence changes and behavioral commitment was greater in the fully specified validation conditions ($r_{xy} = .87$, $p < .001$) than all other conditions (all r_{xy}s $< .42$, all ps $> .05$) of validation specificity.

commitment to the new possible self *when* presented with fully specified validations. Moreover, these findings confirmed that initial confidence elevations mediated the effect of specified validation on both measures of possible self-commitment. Additional mediation analyses also confirmed that this indirect effect of validation on ultimate intention elevations via initial confidence elevations was statistically significant.

Implications

These findings have implications for work on self-verification theory (Swann, 1987), which has repeatedly demonstrated the impressive resilience of self-views in the face of contradictory, even if positive, feedback. One purpose of the present research is to find the breaking point at which this "verification" response gives way to revision responses—namely, although core selves are quite resistant to change, the hypothetical nature of possible self-views makes them a prime target for social revision in the face of contradictory, albeit positive, social feedback on one's potential (Leonardelli & Lakin, 2010).

Relatedly, although the ability to specify the implications of desired feedback into (positive expectancy) support for new desired selves may seem natural for most people (Kunda, 1987), recent evidence suggests that—for those with chronic self-image disturbances— such self-serving tendencies are neither spontaneous nor natural. For example, clinically depressed individuals have trouble spontaneously specifying the implications of favorable feedback (Penland, Masten, Zelhart, Fournet, & Callahan, 2000). Moreover, people high (vs. low) in chronic self-doubt have difficulty generalizing and imagining a strong desired self from their current competencies to effectively motivate and guide the pursuit of important performance goals (Carroll, McCaslin, & Norman, 2011). This study suggests that socially initiated upward self-revision may be more likely and effective in stimulating possible self-expansion among those higher (vs. lower) in chronic self-image disturbances who depend upon others to specify the implications of positive possible self-feedback.

Limitations

Although promising, this work has important limitations. Of course, the most obvious limitation is that it includes only one study. Thus, the present study requires replication to establish the reliability of this effect. Second, this work may have neglected other potential mediators besides initial confidence elevations. For example, critics might argue that baseline confidence or rising desirability rather than confidence elevations may have mediated upward self-revision in this study.

Fortunately, the analyses showed that baseline confidence did not have any unique effects on either commitment measure. Additional analyses also ruled out rising desirability as an alternative mediator of upward self-revision. Specifically, if rising desirability was the key mediator, excitement would rise as specified validations increased the desirability of the possible self and, in turn, rising excitement would mediate the effect. However, rising excitement did not contribute any mediating effects to the model of possible self-commitment. Although these findings rule out a few alternative mediators, replication efforts should also rule out other potential mediators (e.g., expectancy accessibility) not measured in this study to reinforce support for the unique mediating role of rising confidence.

Comparing the Past to the Present

Ultimately, these findings extend past work in several ways. First, whereas most past work has focused on changes in possible self-accessibility (Ruvolo & Markus, 1992), the present work explores changes in commitment. Second, the present work differs from some past work in terms of the proposed origin and time—line of possible self-change. Some work has focused on self-initiated changes that slowly occur as people confront new opportunities and challenges over the lifespan or abruptly occur as people adopt new modes of self-regulation (Oettingen, Pak, & Schnetter, 2001; Rothermund & Brandstädter, 2003; see also Klinger, 1975). By contrast, the present work focuses on socially initiated changes that abruptly occur in response to a single experience of social validation. Third, past work that has explored abrupt changes in possible selves differs from the present work in terms of their primary focus on causes and consequences to the relative neglect of the intervening processes of change (Atkinson & Birch, 1970; Wrosch, Miller, Scheier, & Brun de Pontet, 2007).

Fourth, this work even differs from past work that has explored the intervening process of self-change in terms of the specific mediators hypothesized to drive change. For example, prior work on mental contrasting has demonstrated that changes in cognitive accessibility mediate the effect of mental contrasting on binding goal commitment (Oettingen et al., 2001). Although accessibility provides an implicit strength measure, confidence provides an explicit strength index that reflects how accessibility is *subjectively* experienced and translated into commitment.

Indeed, the prior persuasion research noted earlier showed that attitude accessibility enhances *meta-attitudinal* confidence, which in turn provides the *more proximal mediator* that ultimately translates (a) enhanced attitude accessibility into (b) attitude-consistent

behavior (Holland et al., 2003). Consistent with this work, the present findings suggest that initial confidence elevations do provide an important proximal mediator that ultimately translates the (socially or self-) (a) enhanced accessibility of possible self-expectations into (b) enhanced possible self-commitment. Of course, the indirect pathways of upward self-revision may be conditional such that different conditions may invoke different processes that ultimately lead to the same end of embracing a new possible self. Among other things, there may be multiple routes to upward self-revision—one via cognitive accessibility mechanisms, one via meta—cognitive mechanisms, and another via both mechanisms—just as there are multiple routes to persuasion (Briñol et al., 2010).

Future Work

As far as extensions, future work should examine whether prior accessibility of the possible self-category may moderate the effect of specifying validations on commitment. For example, although participants had little prior information on the fictitious business psychology possible self, they would likely have considerable prior information already accessible for actual career possibilities (social role identities), like becoming a psychologist or accountant. Relevant to this point, recent research suggests that differences in prior accessibility of event-relevant information can moderate the effects of unpacking an event-possibility on subsequent confidence and likelihood judgments (Redden & Frederick, 2011). Specifically, whereas typical unpacking effects emerged when prior accessibility of event-relevant details was low, unpacking *decreased* confidence and likelihood when prior accessibility was high. Mediation analyses showed that unpacking additional details of a prospective outcome scenario reduces perceived simplicity by interfering with scenario-relevant details that are already accessible and, in turn, reduced simplicity serves as a meta-cognitive cue that reduces confidence and, in turn, likelihood.

Thus, future work should examine whether the effects of fully specifying, or unpacking, validations might be moderated—or even reversed—with normative possible self-categories (e.g., doctor) for which prior information is already accessible. For example, fully specifying validations for "accessible" possible selves may actually reduce confidence and, in turn, the ultimate probability that an individual will embrace commitment to a possible self. Of course, this represents only one potential direction for future work to extend the present work.

Relatedly, future work should examine whether the indirect effects via rising confidence are conditional rather than unconditional (see Hayes, 2013). For example, future work may find evidence of moderated mediation such that the indirect effect of validation on commitment can occur through changes in excitement (affective) or expectancies (cognitive accessibility or level) as well as confidence (metacognitive) under different conditions (low vs. high self-doubt or self-esteem).

Finally, future work should address the permanence of behavioral choices to embrace a new possible self. That is, would the new commitment ultimately stick or disappear over time? Of note, Lovett (1998) suggested that behavioral choices that appear permanent ultimately drift back to their initial or ambient position over time. Applied to the present context, future work should examine (a) whether upward self-revision choices do decay and, if so, (b) what factors accelerate or delay that decay over time.

For now, though, this work provides a clearer view of how and when advisors might steer students—who have the motivation and ability but lack the confidence— toward a realistic, new possible self-pursuit that can inspire growth and the very reservoir of self-confidence that they currently lack. Although future work could certainly specify such additional interlocking pathways, the present work goes beyond prior work to *better* specify exactly how as well as when upward self-revision unfolds in response to social validations.

REFERENCES

Atkinson, J. W., & Birch, D. A. (1970). *A dynamic theory of action*. New York, NY: Wiley.

Briñol, P., DeMarree, K. G., & Petty, R. E. (2010). Processes by which confidence (vs. doubt) influences the self. In R. Arkin, K. Oleson, & P. Carroll (Eds.), *The handbook of the uncertain self* (pp. 13–35). New York, NY: Taylor & Francis.

Briñol, P., & Petty, R. E. (2003). Overt head movements and persuasion: A self-validation analysis. *Journal of Personality and Social Psychology*, *84*, 1123–1139.

Briñol, P., Petty, R. E., & Wheeler, S. C. (2006). Discrepancies between explicit and implicit self-concepts: Consequences for information processing. *Journal of Personality and Social Psychology*, *91*, 154–170.

Carroll, P. J., McCaslin, M., & Norman, G. (2011). The expansion and revision of self-theory through Preparedness. *Social and Personality Psychology Compass*, *10*, 1–15.

Carroll, P. J., Shepperd, J. A., & Arkin, R. M. (2009). Downward self-revision: Erasing possible selves. *Social Cognition*, *27*, 550–578.

Carroll, P. J., Sweeny, K., & Shepperd, J. A. (2006). Forsaking optimism. *Review of General Psychology*, *10*, 56–73.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. New York, NY: Guilford.

Hermann, A., Leonardelli, G., & Arkin, R. M. (2004). Self-doubt and self-esteem. A threat from within. *Personality and Social Psychology Bulletin*, *28*, 395–408.

Higgins, E. T. (1987). Self-discrepancy theory: A theory relating self and affect. *Psychological Review*, *94*, 319–340.

Holland, R. W., Verplanken, B., & van Knippenberg, A. (2003). From repetition to conviction: Attitude accessibility as a determinant of attitude certainty. *Journal of Experimental Social Psychology*, *39*, 594–601.

Klinger, E. (1975). Consequences of commitment to and disengagement from incentives. *Psychological Review*, *82*, 1–25.

Koehler, D. (1991). Explanation, imagination, and confidence in judgments. *Psychological Bulletin*, *110*, 499–519.

Kunda, Z. (1987). Motivated inference: Self-serving generation and evaluation of causal theories. *Journal of Personality and Social Psychology*, *53*, 636–647.

Leonardelli, G. J., & Lakin, J. L. (2010). The new adventures of self-regulatory focus: Self-Uncertainty and the quest for a diagnostic self-evaluation. In R. Arkin, K. Oleson, & P. Carroll (Eds.), *The handbook of the uncertain self* (pp. 249–265). New York, NY: Taylor & Francis.

Lovett, M. (1998). Choice. In J. Anderson & C. Lebiere (Eds.), *Atomic components of thought* (pp. 297–342). San Diego, CA: Academic Press.

Markus, H., & Ruvolo, A. (1989). Possible selves: Personalized representations of goals. In L. S. Pervin (Ed.), *Goal concepts in personality and social psychology* (pp. 211–241). Hillsdale, NJ: Erlbaum.

Oettingen, G., & Kappes, A. (2009). Mental contrasting of the future and reality to master negative feedback. In K. D. Markman, W. M. P. Klein, & J. A. Suhr (Eds.), *Handbook of imagination and mental simulation* (pp. 395–412). New York, NY: Psychology Press.

Oettingen, G., Pak, H., & Schnetter, K. (2001). Self-regulation of goal setting: Turning free fantasies about the future into binding goals. *Journal of Personality and Social Psychology*, *80*, 736–753.

Oyserman, D., Bybee, D., & Terry, K. (2006). Possible selves and academic outcomes: How and when possible selves impel action. *Journal of Personality and Social Psychology*, *91*, 188–204.

Penland, E. A., Masten, W. G., Zelhart, P., Fournet, G. P., & Callahan, T. A. (2000). Possible selves, depression and coping skills in university students. *Personality and Individual Differences*, *29*, 963–969.

Redden, J. P., & Frederick, S. (2011). Unpacking unpacking: Can greater detail reduce perceived likelihood? *Journal of Experimental Psychology: General*, *140*, 159–167.

Rothermund, K., & Brandstädter, J. (2003). Coping with deficits and losses in later life: From compensatory action to accommodation. *Psychology & Aging*, *18*, 896–905.

Rottenstreich, Y., & Tversky, A. (1997). Unpacking, repacking, and anchoring: Advances in Support Theory. *Psychological Review*, *104*, 406–415.

Ruvolo, A. P., & Markus, H. R. (1992). Possible selves and performance: The power of self-relevant imagery. *Social Cognition*, *10*, 95–124.

Swann, W. B., Jr. (1987). Identity negotiation: Where two roads meet. *Journal of Personality and Social Psychology*, *53*, 1038–1051.

Tversky, A., & Koehler, D. J. (1994). Support theory: A nonextensional representation of subjective probability. *Psychological Review*, *101*, 547–567.

Wrosch, C., Miller, G. E., Scheier, M. F., & Brun de Pontet, S. (2007). Giving up on unattainable goals: Benefits for health? *Personality and Social Psychology Bulletin*, *33*, 251–265.