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# To think or to do: The impact of assessment and locomotion orientation on the Michelangelo phenomenon

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ABSTRACT

This work examines how individual differences in assessment and locomotion shape goal pursuits in ongoing relationships. The Michelangelo phenomenon describes the role that close partners play in affirming versus disaffirming one another's pursuit of the ideal self. Using data from a longitudinal study of ideal goal pursuits among newly committed couples, we examined whether the action orientation that characterizes locomotion creates an optimal environment in which to give and receive affirmation, whereas the evaluative orientation that characterizes assessment creates a suboptimal environment for giving and receiving affirmation. Consistent with hypotheses, locomotion is positively associated with partner affirmation, movement toward the ideal self, and couple wellbeing, whereas parallel associations with assessment are negative. We also explore the behavioral mechanisms that may account for such associations.

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*Come on baby, do the locomotion with me!*

– Carole King & Gerry Goffin

Close partners play a crucial role in one another's growth strivings. Research regarding the Michelangelo phenomenon demonstrates that people are more likely to enjoy movement toward their ideal selves and achieve important personal goals to the extent that their partners affirm their ideals. Moreover, both affirmation and movement toward ideal contribute to personal wellbeing and couple wellbeing (Drigotas, Rusbult, Wieselquist, & Whitton, 1999). However, scientists have not heretofore explored whether the self-regulatory traits that influence *individual* growth strivings play parallel roles in inherently *interpersonal* settings. The present research examines the ways in which partner affirmation and individual movement toward the ideal self may be shaped by individual differences in assessment and locomotion (Kruglanski et al., 2000).

### **The Michelangelo phenomenon**

The self does not spring full-blown from a vacuum. Rather, interpersonal experience plays an integral role in shaping the self, including experiences of reflexive consciousness (e.g., conscious awareness of ourselves), self as interpersonal being (e.g., self in relation to others), and self as executive agent (e.g., choosing, taking action; for a review, see Baumeister, 1998). The concept of the socially constructed self has a long history, and is integral to James's (1890) notion of the multiplicity of social selves, to Cooley's (1902) conceptualization of the looking glass self, and to Mead's (1934) claim that interaction partners elicit specific components of one another's behavioral repertoires. More recently, research on behavioral confirmation has demonstrated that interaction partners create opportunities for each person to display some behaviors while inhibiting other behaviors, thereby shaping one another's selves (cf. Harris & Rosenthal, 1985).

Close partners have particularly good opportunities to sculpt one another's selves, in that interdependence entails strong and frequent influence across diverse behavioral domains (Kelley et al., 1983). Via *adaptation* partners adjust to one another over the course of extended interaction, selectively developing some qualities and inhibiting others (Kelley et al., 2003). Over time such adaptations become habitual, and come to be embodied in relatively stable dispositions – each person's self comes to reflect the particular conditions of interdependence experienced with the partner (Rusbult & Van Lange, 2003).

We propose that whether such influence yields beneficial versus detrimental consequences depends on the precise nature of partners' sculpting.

Michelangelo Buonarroti proposed that a sculptor's job is simply to chip away at a block of stone so as to reveal the ideal form that slumbers within (Gombrich, 1995). The human equivalent of the ideal form is the *ideal self*, a possible self to which the individual aspires (Higgins, 1987; Markus & Nurius, 1986). The ideal self frames and guides cognition and behavior by motivating attempts to reduce the discrepancy between the ideal self and the actual self (Higgins, 1987). Consistent with this orientation, we define the ideal self and the actual self as the internal representations of dispositions, values, and behavioral tendencies that individuals believe they actually possess (*actual self*) or ideally wish to acquire (*ideal self*). Such internal representations include traits, professional aspirations, interpersonal goals, or other skills or experiences that are central to the individual's representations of the actual self (e.g., 'I am a good scientist but am not cultured') and ideal self (e.g., 'I would like to be an even better scientist, and would also like to be more physically fit'; cf. Markus & Nurius, 1986).

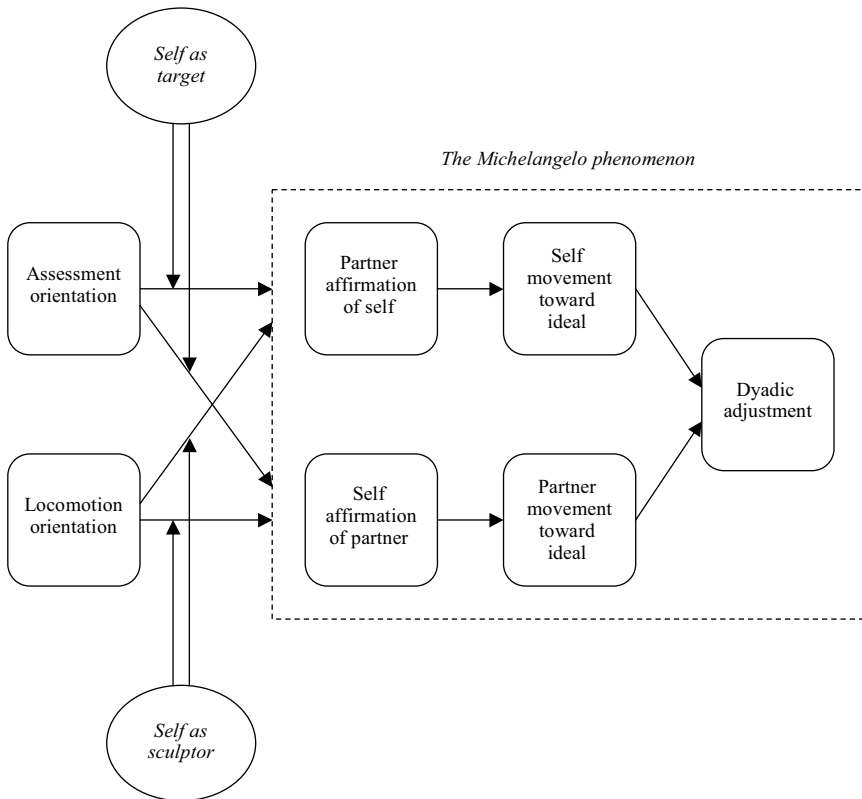
The Michelangelo model suggests that close partners play an important role in sculpting one another, causing each person to move closer to (versus further from) his or her ideal self (Drigotas et al., 1999; Rusbult, Kumashiro, Stocker, & Wolf, 2005). *Partner affirmation* describes the degree to which a partner's perceptions and behaviors are congruent with the individual's ideal self: Does John perceive Mary in ways that are compatible with the person she most wants to become, and does he behave toward her in such a manner as to elicit ideal-congruent tendencies? Partner affirmation yields *movement toward the ideal self* – individuals progressively achieve their goals and increasingly resemble that which they ideally wish to become. Moreover, both partner affirmation and movement toward the ideal self are associated with healthy couple functioning (see Figure 1). For example, John's encouragement versus criticism of Mary's writing may affect her motivation to write, which in turn may have implications for their relationship health.

Partners play two roles in relationships – sometimes Mary is sculpted by John, and sometimes she sculpts John. The present work seeks to illuminate both roles: (i) *self as the target of sculpting*, examining a partner's affirmation of the individual and the individual's movement toward his or her ideal self; and (ii) *self as sculptor*, examining an individual's affirmation of the partner and the partner's movement toward his or her ideal self. We suggest that some individuals are easier to sculpt than others, and that some partners are more talented sculptors than others. For example, to the extent that Mary clearly articulates her goals, John's job as a sculptor is easier. To the extent that John is critical, Mary may be reluctant to seek his advice. What factors account for individual differences in target and sculptor behaviors?

### **Assessment, locomotion, and the Michelangelo phenomenon**

Individual differences in self-regulation arguably shape pursuit of the ideal self, in that self-regulation entails (i) evaluating and selecting among possible

**FIGURE 1**  
**Assessment orientation, locomotion orientation, and the Michelangelo phenomenon.**



end-states and (ii) taking action to move oneself closer to desired end-states (e.g., Carver & Scheier, 1990; Kruglanski et al., 2000). Such self-regulatory traits are important for the ongoing sculpting process in that traits are relatively stable over time and guide behavior in a consistent manner across diverse situations (e.g., Allport, 1937). We suggest that individual differences in *self*-regulation also play a role in *interpersonal* regulation. As targets of our partners' sculpting, our regulatory traits are likely to influence the way in which we establish and pursue our goals, as well as our receptivity to sculpting, thereby creating optimal versus suboptimal environments for partner affirmation. And as sculptors, we are likely to apply our own regulatory traits to the targets of our sculpting, which in turn may influence the target's goal pursuits and receptiveness to our sculpting.

Individual differences in assessment and locomotion concern the manner in which people select, evaluate, and pursue goals (Kruglanski et al., 2000). *Assessment* describes the evaluative and comparative component of goal

pursuit. High assessment is associated with critical evaluation of goals and alternative means to achieve them, sensitivity to discrepancies between current and desired states, and negative affect. Assessment may also yield auxiliary consequences, in that constant reevaluation of goals may leave assessors confined to the current state (Avnet & Higgins, 2003). *Locomotion* describes the action mode of self-regulation. High locomotion is associated with establishing attainable goals, positive affect, and an emphasis on swift movement from state to state. Locomotion may also yield auxiliary consequences, in that repeated attempts at goal pursuit may afford a sense of determination (Shah & Kruglanski, 2003).

Assessment and locomotion are chronic individual orientations that are relatively stable over time and that predict self-regulatory behavior across diverse situations (Higgins, Kruglanski, & Pierro, 2003; Kruglanski et al., 2000). Assessment and locomotion differ meaningfully from other self-regulatory traits, such as action and state orientation (Kuhl, 1985) and deliberation and implementation (Gollwitzer & Bayer, 1999; for a review, see Kruglanski et al., 2000). Moreover, whereas traits such as promotion and prevention (Higgins, 1996) emphasize sensitivity to gains versus losses, assessment and locomotion concern evaluation and movement, irrespective of whether achieving a goal entails gains or losses (Kruglanski et al., 2000). As such, assessment and locomotion may illuminate our knowledge of how key components of *self-regulation* – specifically, (i) evaluating and selecting among possible end-states and (ii) taking action to move oneself closer to desired end-states – play out in the context of *interpersonal* regulation.

### **Self as the target of sculpting**

Targets' tendencies to approach goals with an evaluative versus action-oriented stance may influence how easy versus difficult it is for their partners to sculpt them. Ironically, high assessors' focus on evaluation – their intense desire to 'do it right' – may ultimately yield inaction, due to their tendency to select important yet less attainable goals, negativity, and constant evaluation of goals and means (Kruglanski et al., 2000). This tendency toward extensive cogitation may make high assessors somewhat self-centered, preoccupied, and unreceptive to the partner. Consequently, assessors may create a suboptimal environment for sculpting – their partners have the unenviable task of trying to affirm targets who are frequently pessimistic, unreceptive, or critical, and who adopt problematic goals. This less-than-ideal environment should also yield negative consequences for relationships.

In contrast, we suggest that locomotion-oriented individuals' focus on action creates a more favorable environment for growth, due to their selection of attainable goals, positivity, and eagerness to move from state to state. Because high locomotors are action-oriented, they are likely to encourage partner involvement by being receptive to their partner's input and exhibiting a flexible attitude (Kruglanski et al., 2000). Consequently, locomotors may create an optimal environment for sculpting – their partners have the enviable task of affirming targets who are receptive, flexible, and optimistic,

and who energetically approach attainable goals. This pleasing environment should also yield positive consequences for relationships.

### **Self as sculptor**

Sculptors are likely to approach targets' goals in the same manner as they approach their own goals, with all of the associated strengths and liabilities. High assessors' absorption in evaluation and critique (Kruglanski et al., 2000) may make them somewhat self-centered and critical of their partners' pursuits, may yield a critical and pessimistic stance, and may implicitly or explicitly discourage their partners from vigorously pursuing goals. As such, the targets of their sculpting may feel reluctant to invite their involvement, in that assessors are inclined to judge, criticize, and complain. Consequently, high assessors may be less skillful sculptors, creating a suboptimal environment for growth.

In contrast, high locomotors are likely to adopt the same action-oriented stance regarding their partners' goals as they adopt with their own. Because they are inclined toward action and optimism (Kruglanski et al., 2000), they are likely to develop positive beliefs about the target's goals and exhibit supportive affirmation, actively participating in the target's goal pursuits. As such, the targets of their sculpting may find it easy to invite their assistance, in that locomotors are encouraging and construe the target's goal pursuits as desirable and attainable. Consequently, high locomotors may be more skillful sculptors, creating an optimal environment for growth.

## **Hypotheses and research overview**

The present study investigates how individual differences in assessment and locomotion may facilitate versus inhibit the Michelangelo phenomenon. The data we employ are from the last two research occasions of a five-wave longitudinal study of ideal goal pursuits. We address three key hypotheses. First, high locomotion orientation should be associated with receiving greater affirmation (as target) and providing greater affirmation (as sculptor); parallel associations with assessment should be negative. Second, high locomotion orientation should be associated with greater movement toward the ideal self (as target) and greater partner movement toward the ideal self (as sculptor); parallel associations with assessment should be negative. And third, in part as a consequence of such effects on affirmation and movement toward ideal, dyadic adjustment should be enhanced in locomotors' relationships and impaired in assessors' relationships. We also explore the diverse behavioral mechanisms that high assessors and high locomotors exhibit, exploring self-as-target mechanisms such as choice of goals (difficulty, attainability), behavior toward partner (receptiveness, sulking), and perceived partner behavior (motivation, skill, discouragement), and exploring self-as-sculptor mechanisms such as evaluation of target goals (perceived benefits, difficulty), behavior toward target (participation, criticism), and perceived target behavior (receptiveness, neglect).

## Method

### Participants

The data for our analyses are from 136 couples who took part in Time 4 activities of a five-wave longitudinal study (134 heterosexual and 2 lesbian couples), as well as 95 couples who took part in Time 5 activities (all heterosexual). At Time 4 participants were 27.10 years old on average. Their median personal income was \$25,000, and their median education level was a master's degree (36% were students). Most partners were married (11% dating steadily, 11% engaged, 75% married, 3% other) and most lived together (97%).

### Procedure

We recruited participants via notices posted in the Chapel Hill, NC community. We required that couples be 'newly committed' – at Time 1, they had begun living with one another, become engaged, or married one another within the previous year, or planned to do so during the coming year. At Time 4 we mailed couples questionnaires that they returned to us in stamped, addressed envelopes. Six months later they participated in Time 5 laboratory sessions during which they completed questionnaires and engaged in other project activities (e.g., videotaped interactions). At the end of each research occasion we partially debriefed couples, paid them, and thanked them for their assistance. Couples received \$60 payment at Time 4 and \$110 at Time 5.

### Dependent measures

**Key constructs.** Measures of key constructs were dispersed across separate questionnaires, so as to dissociate responses to one questionnaire from responses to others. Key constructs were assessed at both Times 4 and 5. We measured couple wellbeing using a 30-item version of the Dyadic Adjustment Scale that taps components of functioning such as agreement regarding values (religion, career decisions), conflict management, shared activities, and expressions of love (Spanier, 1976; e.g., 'Do you confide in your partner?'; 0 = 'never,' 5 = 'all the time; Time 4 and 5  $\alpha$ s = .92 and .91). We measured *self movement toward ideal* using a modified version of the Drigotas et al. (1999) instrument: We asked participants to 'think about your ideal self, or the overall person you aspire to become ... Consider aspirations in all domains of your life – personal, professional, and relational.' Participants reported on movement toward their ideals in each of five domains – professional aspirations, personal traits, relationship goals, other domains, and overall ideal self (e.g., 'other domains [e.g., hobbies, health, spirituality]'; -4 = 'I have moved further from my ideal self,' 0 = 'I have not changed,' +4 = 'I have moved closer to my ideal self; Time 4 and 5  $\alpha$ s = .77 and .80). We measured *perceived partner movement toward ideal* using a parallel procedure ( $\alpha$ s = .80 and .84). We measured *self affirmation of partner* using a modified, 4-item version of the Drigotas et al.'s scale (e.g., 'I behave in ways that help my partner become who he/she most wants to be; 0 = 'do not agree at all,' 8 = 'agree completely;  $\alpha$ s = .88 and .87), and measured *perceived partner affirmation of self* using parallel items ( $\alpha$ s = .92 and .89). And we measured *assessment and locomotion orientation* using the Kruglanski et al.'s (2000) 26-item instrument (e.g., for assessment, 'I often critique work done by myself or others'; for locomotion, 'I am a "doer"; 0 = 'do not agree at all,' 8 = 'agree completely; for assessment,  $\alpha$ s = .77 and .76; for locomotion,  $\alpha$ s = .82 and .85).

**Behavioral mechanisms.** For the purpose of the present research, we developed 31 measures to explore the means by which locomotion and assessment influence Michelangelo variables. Some mechanisms were measured only at Time 4 and some only at Time 5. Many mechanisms were measured in such a manner as to link them to specific experiences regarding each person's 'top three goals.' (Elsewhere, we asked participants to identify the goals that were the most important components of their ideal selves and not the 'ought goals' that other people thought they should pursue.) For these 'top three goals' measures, some reliability coefficients were lower than would be ideal (average  $\alpha = .64$ , range =  $.52$  to  $.85$ ; for traditional measures, average  $\alpha = .81$ , range =  $.70$  to  $.94$ ). Presumably, these 'top-goals' measures exhibited lower reliability because people do not have identical experiences across all of their goals. These measures arguably are nevertheless valid, in that they tap overall experiences regarding important concerns, even if these experiences are not entirely consistent across goals.

Due to space limitations, we provide information about representative mechanisms (see full lists in Tables 3 and 5). For situations involving the *self as the target of sculpting*, we assessed mechanisms such as: *Perceived likelihood of achieving goals* (for each of top six goals, 'How likely is it that you will achieve this goal within the next 5 to 10 years?';  $\alpha = .68$ ); *self is receptive to partner support* (2 items for top three goals, e.g., 'I welcome my partner's support of my pursuit of this goal';  $\alpha = .78$ ); *partner has no time or energy for self's goals* (1 item; 'My partner often doesn't have the time or energy to help me in my goal pursuits'); and *self satisfaction with partner affirmation* (for top six goals, 'I am very satisfied with my partner's behavior regarding my pursuit of this goal – with his or her assistance and involvement, approval and encouragement';  $\alpha = .85$ ).

For *self as sculptor*, we assessed mechanisms such as: *Goals are beneficial for target* (for each of top three goals, 'Pursuing this goal is good for my partner [is pleasant, makes him/her feel good, yields benefits]';  $\alpha = .62$ ); *self celebrates target's accomplishments* (Gable, Reis, Impett, & Asher, 2004 Capitalization Scale; 16 items; e.g., 'When my partner tells me about something good that happens to him or her, I react to my partner's good fortune with clear and genuine enthusiasm';  $\alpha = .81$ ); *self complains about target's goals* (for top three goals, 'I complain about [or express dissatisfaction with] my partner's pursuit of this goal';  $\alpha = .65$ ); *target is receptive to self's support* (2 items for top three goals, e.g., 'My partner welcomes my support of his/her efforts to pursue this goal';  $\alpha = .80$ ); and *target satisfaction with self affirmation* (for top six goals, 'My partner is very satisfied with my behavior regarding his/her pursuit of this goal – with my assistance and involvement, approval and encouragement';  $\alpha = .83$ ).

## Results

### Analysis strategy

Our design includes three levels of nesting – data from Times 4 and 5 are nested within individuals, and data from the two partners in a relationship are nested within couple (Kenny, Kashy, & Bolger, 1998). We used hierarchical linear modeling methods to analyze our data (Raudenbush & Bryk, 2002). This technique simultaneously examines lower-level and upper-level variance, thereby modeling each source of variance while accounting for statistical characteristics of the other level. We initially performed analyses representing intercepts and

slopes as random effects. When tests examining variance and covariance components revealed nonsignificant across-couple differences in slopes, we recalculated models representing slopes as fixed effects. Importantly, the associations reported below were reliably observed – representing effects as fixed versus random did not yield substantively meaningful differences in our findings.

In testing a given hypothesis, we first calculated *one-predictor models*, examining the association of a single predictor with a single criterion. When a hypothesis included multiple predictors we also calculated *multiple-predictor models*, regressing a criterion simultaneously onto two or more predictors. We also performed auxiliary analyses to examine possible main effects or interactions involving participant sex, as well as interactions of assessment with locomotion. Significant or marginal interactions with sex were observed in 8% of the analyses, and interactions of assessment with locomotion were observed in 2% of the analyses. Given that these interactions were scattered and inconsistent, we dropped these effects from the analyses. (We return to the issue of assessment by locomotion interactions at the end of the results section.)

### **Reliability and validity of assessment and locomotion measures**

An exploratory factor analysis performed on Time 4 measures of assessment and locomotion (varimax rotation) confirmed the reliability and validity of the Kruglanski et al.'s (2000) measures of assessment and locomotion, revealing a two-factor structure with good fit (explained variance = 74%). The within-person association of assessment with locomotion was weak at Time 4 ( $r = .13$ ,  $p < .04$ ) and nonsignificant at Time 5 ( $r = .01$ , *ns*), suggesting that these traits are largely independent. In addition, participants' scores at Times 4 and 5 (separated by a 6-month interval) were strongly associated for both assessment ( $r = .70$ ,  $p < .01$ ) and locomotion ( $r = .74$ ,  $p < .01$ ), suggesting that these orientations are relatively trait-like.

### **Validity of the Michelangelo model**

Using Time 4 data, we tested the general model from the perspectives of both (i) self-as-target (i.e., the person whose ideal self is being sculpted) and (ii) self-as-sculptor (i.e., the person who is sculpting the other's ideal self). The results of these analyses are summarized in Table 1. As anticipated, for self-as-target analyses, perceived partner affirmation of the self is significantly predictive of self movement toward ideal, and both self movement toward ideal and perceived partner affirmation account for unique variance in adjustment. Parallel findings were observed in self-as-sculptor analyses. We also performed mediation analyses to evaluate the plausibility of our claim that affirmation is good for couples at least in part because it promotes each person's movement toward his or her ideal self (z-scores are based on Sobel's test; Kenny et al., 1998). Here, too, the obtained findings support predictions (under Dyadic Adjustment, see rows labeled *Affirmation – mediation by movement*): (i) The association of partner affirmation with dyadic adjustment is significantly (yet partially) mediated by self movement toward ideal ( $z = 3.90$ ,  $p < .01$ ); and (ii) the association of self affirmation of partner with adjustment is significantly (yet partially) mediated by partner movement toward ideal ( $z = 2.55$ ,  $p < .01$ ).

**TABLE 1**  
**The Michelangelo phenomenon: Affirmation, movement toward the ideal self, and dyadic adjustment**

	One-predictor models	Multiple-predictor models		
		$\beta$	<i>t</i>	<i>p</i> <
<b>Self as the target of sculpting</b>				
Self movement toward ideal from:				
Perceived partner affirmation of self		.49	8.38	.01
Dyadic adjustment from:				
Self movement toward ideal	.33**	.22	4.38	.01
Perceived partner affirmation of self	.56**	.47	7.00	.01
Affirmation – mediation by movement: <i>z</i> =			3.90	.01
<b>Self as sculptor</b>				
Perceived partner movement toward ideal from:				
Self affirmation of partner		.51	9.12	.01
Dyadic adjustment from:				
Perceived partner movement toward ideal	.22**	.16	2.64	.01
Self affirmation of partner	.35**	.29	4.92	.01
Affirmation – mediation by movement: <i>z</i> =			2.55	.01

Note. Analyses are based on data from 124 couples (*df* varied across analyses due to missing data for some variables).

\**p* < .05; \*\**p* < .01; +*p* < .10.

**Self as target of sculpting**

**Michelangelo model variables.** Do individual differences in self-regulation affect whether individuals effectively elicit affirming behaviors from their partners? We examined this question using Time 4 data, the results of which are displayed in Table 2. As predicted, assessment is negatively associated with perceived partner affirmation and dyadic adjustment (but not with self movement toward ideal), and locomotion is positively associated with perceived partner affirmation of the self, self movement toward ideal, and dyadic adjustment. We also performed mediation analyses, comparing coefficients from two-factor analyses (with assessment and locomotion as predictors) to those in three-factor analyses (with perceived partner affirmation of the self, assessment, and locomotion as predictors). Consistent with the assumption that assessment is harmful because high assessors elicit less partner affirmation, the association of assessment with adjustment is significantly (yet partially) mediated by perceived partner affirmation (under Dyadic Adjustment, see row labeled *Assessment – mediation by affirmation*). (We did not examine mediation for the other two assessment analyses because assessment scores were not associated with the presumed mediators.) Consistent with the claim that partners find it easier to affirm locomotion-oriented targets, the association of locomotion with self movement toward ideal is significantly (yet partially) mediated by perceived partner affirmation of the self. And consistent with the assumption that locomotion is beneficial to couples in part because high locomotors elicit greater partner affirmation and in part because they enjoy greater movement

**TABLE 2**  
**Self as the target of sculpting: Assessment orientation, locomotion orientation, and Michelangelo model variables**

	One-predictor models	Multiple-predictor models		
		$\beta$	$t$	$p <$
Perceived partner affirmation of self from:				
Assessment orientation	-.08	-.12	-2.10	.04
Locomotion orientation	.21**	.23	4.07	.01
Self Movement toward ideal from:				
Perceived partner affirmation of self	.49**	.46	7.69	.01
Assessment orientation	(.02)	.08	1.43	.16
Locomotion orientation	(.23)**	.13	2.13	.04
(Assessment/affirmation association <i>ns</i> )				
Locomotion – mediation by affirmation: $z =$			3.62	.01
Dyadic adjustment from:				
Self movement toward ideal	.33**	.36	6.85	.01
Assessment orientation	(-.14)**	-.16	-3.22	.01
Locomotion orientation	(.20)**	.16	3.30	.01
(Assessment/movement association <i>ns</i> )				
Locomotion – mediation by movement: $z =$			3.26	.01
Dyadic adjustment from:				
Perceived partner affirmation of self	.56**	.52	7.52	.01
Assessment orientation	(-.14)**	-.09	-1.96	.08
Locomotion orientation	(.20)**	.11	2.39	.04
Assessment – mediation by affirmation: $z =$			-2.04	.04
Locomotion – mediation by affirmation: $z =$			3.60	.01

*Note.* Analyses are based on data from 124 couples (*df* varied across analyses due to missing data for some variables). Tests of mediation compare findings from two-factor and three-factor models; coefficients in parentheses are from two-factor models including both assessment and locomotion as predictors.

\* $p < .05$ ; \*\* $p < .01$ ; + $p < .10$ .

toward their ideals, the association of locomotion with adjustment is significantly (yet partially) mediated by both partner affirmation and self movement toward ideal.

**Behavioral mechanisms.** What mechanisms might account for the fact that assessment exhibits negative associations with model variables whereas parallel associations with locomotion are positive? We examined 21 mechanisms, each of which is associated with both perceived partner affirmation (average absolute value of  $\beta$ s = .32, range = .11 to .68, all  $ps < .10$ ) and self movement toward ideal (average absolute value of  $\beta$ s = .28, range = .11 to .50, all  $ps < .10$ ). We regressed each mechanism simultaneously onto assessment and locomotion. Table 3 displays coefficients from these analyses for assessment (see *Assessment orientation* column) and locomotion (see *Locomotion orientation* column) for each criterion (each row in the table).

We anticipated that assessors would create a suboptimal environment for being sculpted, whereas locomotors would create an optimal environment.

**TABLE 3**  
**Self as the target of sculpting: Assessment orientation, locomotion orientation, and behavioral mechanisms**

	Assessment orientation	Locomotion orientation
Self choice of goals –		
Perceived likelihood of achieving goals	–.16**	.39**
Goals are beneficial for self	–.13*	.19**
Goals are beneficial for partner	–.11+	.14*
Goals are fantasies	.19**	–.25**
Goals are difficult for self	.17**	–.11+
Goals are difficult for partner	.21**	–.07
Self behavior toward partner		
Self is receptive to partner support	–.13*	.23**
Self is considerate of partner	–.10	.13*
Self neglects partner in favor of goals	.16*	–.12+
Self sulks at partner	.31**	.04
Perceived partner behavior toward self		
Partner celebrates self's accomplishments	–.29**	.16*
Partner challenges self to achieve goals	–.10	.20**
Partner is unconditionally supportive	–.02	.20**
Partner is motivated to help	–.06	.18*
Partner is a skillful sculptor	.02	.20**
Partner doubts self's abilities	.11	–.29**
Partner has no time or energy for self's goals	.16+	–.22**
Partner disapproves of self's goals	.20**	–.11+
Partner complains about self's goals	.23**	–.05
Partner sculpts self inappropriately	.18*	–.10
Self satisfaction with partner affirmation	–.19**	.17**
Partner affirmation of self – mediation by self satisfaction: $z =$	–2.50**	2.69**
Self movement toward ideal – mediation by self satisfaction: $z =$	–2.39*	2.54**

*Note.* All analyses are two-factor regression models wherein each criterion was regressed simultaneously onto assessment and locomotion orientation. Analyses are based on data from 95 to 124 couples (*df* varied across analyses due to missing data for some variables).

\* $p < .05$ ; \*\* $p < .01$ ; + $p < .10$ .

Consistent with predictions, assessment is negatively associated – and locomotion is positively associated – with beneficial aspects of the self-as-target environment, including (i) the individual's choice of goals – for example attainable and mutually beneficial goals (see *Self choice of goals*; for assessment and locomotion respectively, 6 of 6 and 5 of 6 associations significant or marginal); (ii) the individual's behavior toward the partner – for example receptiveness to the partner, partner neglect (see *Self behavior toward partner*; 3 of 4 associations each); and (iii) the partner's behavior toward the individual – for example partner support, positive motivation, disapproval (see *Perceived partner behavior toward self* (respectively, 5 of 10 and 8 of 10 associations). Consistent with our final, summary prediction regarding self-as-target processes, satisfaction with the partner's affirmation was negatively associated with assessment and positively

associated with locomotion (see *Self satisfaction with partner affirmation*). Given that satisfaction is a good subjective summary of experiences as target, we examined the extent to which it mediates the associations of assessment and locomotion with key model variables. Indeed, satisfaction with affirmation mediates the associations of both assessment and locomotion with perceived partner affirmation ( $z_s = -2.50$  and  $2.69$ , both  $ps < .01$ ) and self movement toward ideal ( $z_s = -2.39$  and  $2.54$ , both  $ps < .02$ ).

**Self as sculptor**

**Michelangelo model variables.** We predicted that high assessment individuals would exhibit less affirmation, inhibit their partners' movement toward their ideal selves, and experience poor couple functioning, and that parallel associations with locomotion would be positive. As predicted (see Table 4), assessment is negatively associated with self affirmation of the partner, perceived partner movement toward ideal, and dyadic adjustment, whereas parallel associations

**TABLE 4**  
**Self as sculptor: Assessment orientation, locomotion orientation, and Michelangelo model variables**

	One-predictor models	Multiple-predictor models		
		$\beta$	$t$	$p <$
Self affirmation of partner from:				
Assessment orientation	-.14*	-.18	-2.94	.01
Locomotion orientation	.26**	.29	4.71	.01
Perceived partner movement toward ideal from:				
Self affirmation of partner	.51**	.49	8.16	.01
Assessment orientation	(-.10)+	-.02	-0.41	.69
Locomotion orientation	(.23)**	.10	1.76	.09
Assessment – mediation by affirmation: $z =$			-2.79	.01
Locomotion – mediation by affirmation: $z =$			4.10	.01
Dyadic adjustment from:				
Perceived partner movement toward ideal	.22**	.19	2.95	.01
Assessment orientation	(-.12)*	-.12	-2.61	.04
Locomotion orientation	(.19)**	.16	3.44	.01
(Assessment/movement association $ns$ )				
Locomotion – mediation by movement: $z =$			2.38	.01
Dyadic adjustment from:				
Self affirmation of partner	.35**	.31	5.83	.01
Assessment orientation	(-.12)*	-.09	-1.73	.09
Locomotion orientation	(.19)**	.14	2.75	.01
Assessment – mediation by affirmation: $z =$			-2.66	.01
Locomotion – mediation by affirmation: $z =$			3.70	.01

*Note.* Analyses are based on data from 124 couples ( $df$  varied across analyses due to missing data for some variables). Tests of mediation compare findings from two-factor and three-factor models; coefficients in brackets are from two-factor models including both assessment and locomotion as predictors.

\* $p < .05$ ; \*\* $p < .01$ ; + $p < .10$ .

with locomotion are positive. We also performed mediation analyses, comparing coefficients from two-factor analyses (with assessment and locomotion as predictors) to those in three-factor analyses (with self affirmation of partner, assessment, and locomotion as predictors). Consistent with predictions, the associations of assessment with both partner movement toward ideal and dyadic adjustment are significantly mediated by self affirmation of partner; the association of locomotion with partner movement toward ideal is mediated by self affirmation of partner; and the association of locomotion with adjustment is mediated by both self affirmation of partner and partner movement toward ideal. (We did not examine mediation for the third assessment analysis because assessment was not associated with the presumed mediator.)

**Behavioral mechanisms.** What mechanisms might account for findings regarding associations among assessment, locomotion, and self-as-sculptor processes? We examined 15 mechanisms, each of which is potentially relevant in that all 15 are significantly associated with self affirmation of partner (average absolute value of  $\beta$ s = .38, range = .16 to .66, all  $ps < .01$ ) and 14 of 15 are significantly associated with partner movement toward ideal (average absolute value of significant  $\beta$ s = .30, range = .18 to .51, all  $ps < .01$ ). Table 5 displays coefficients for analyses wherein we regressed each criterion simultaneously onto assessment and locomotion.

As predicted, assessment exhibits negative associations – and locomotion exhibits positive associations – with beneficial aspects of the self-as-sculptor environment, including (i) the self's evaluation of the target's goals – for example goals are mutually beneficial (see *Self evaluation of target goals*; 3 of 4 associations each); (ii) the self's behavior toward the target – for example challenging the target (see *Self behavior toward target*; 7 of 8 associations each); and (iii) perceived target behavior – for example being receptive to support (see *Target behavior toward self*; 2 of 2 associations each). Consistent with our summary prediction regarding self-as-sculptor processes, assessment is negatively associated with target satisfaction with the self's affirmation, whereas the association with locomotion is positive (see *Target satisfaction with self affirmation*). Given that satisfaction is a good subjective summary of the target's Michelangelo-relevant experiences, we examined the extent to which satisfaction mediates the associations of assessment and locomotion with key model variables. Indeed, satisfaction with affirmation significantly mediates the associations of both assessment and locomotion with self affirmation ( $z$ s = -2.34 and 5.17, both  $ps < .02$ ) and partner movement toward ideal ( $z$ s = -2.29 and 4.65, both  $ps < .02$ ).

### Change over time in Michelangelo model variables

To evaluate the plausibility of claims regarding the causal effects of individual differences in self-regulatory orientation, we performed residualized lagged analyses to examine the power of Time 4 assessment and locomotion in predicting Time 5 Michelangelo variables – perceived partner affirmation of self, self movement toward ideal, self affirmation of partner, perceived partner movement toward ideal, and dyadic adjustment. These are challenging tests in that they entail controlling for earlier levels of the criterion. Therefore, it is striking that the analyses replicate earlier-reported concurrent analyses: Earlier assessment is significantly predictive of declines over time in three of five criteria (average absolute value of  $\beta$ s = .08, range = -.13 to .05, 3 of 5  $ps < .05$ ),

**TABLE 5**  
**Self as sculptor: Assessment orientation, locomotion orientation, and behavioral mechanisms**

	Assessment orientation	Locomotion orientation
Evaluation of target goals		
Goals are beneficial for target	-.11+	.22**
Goals are beneficial for self	-.09	.29**
Goals are difficult for target	.15*	-.09
Goals are difficult for self	.17**	-.17**
Self behavior toward target		
Self celebrates target's accomplishments	-.35**	.27**
Self challenges target to achieve goals	-.04	.45**
Self supports target's goal pursuits	-.11+	.25**
Self participates in target's goal pursuits even when it is difficult to do so	-.13*	.37**
Self neglects relational needs	.24**	-.17**
Self complains about target's goals	.16*	-.14**
Self discourages target when target goals are problematic for self	.19**	-.21*
Self criticizes target for not working harder	.24**	.17**
Target behavior toward self		
Target is receptive to self's support	-.12*	.20**
Target neglects self in favor of goals	.14*	-.18**
Target satisfaction with self affirmation	-.14*	.33**
Self affirmation of partner – mediation by target satisfaction: $z =$	-2.34*	5.17**
Partner movement toward ideal – mediation by target satisfaction: $z =$	-2.29*	4.65**

*Note.* All analyses are two-factor regression models wherein each criterion was regressed simultaneously onto assessment and locomotion orientation. Analyses are based on data from 95 to 124 couples (*df* varied across analyses due to missing data for some variables).

\* $p < .05$ ; \*\* $p < .01$ ; + $p < .10$ .

and earlier locomotion is significantly or marginally predictive of increases over time in all five criteria (average absolute value of  $\beta$ s = .15, range = .07 to .28, all  $p$ s < .10).

Is it possible that individual differences in assessment and locomotion are *effects* rather than *causes*? To examine the plausibility of the reverse ordering of variables we performed a second set of residualized lagged analyses, examining the power of Time 4 Michelangelo variables in predicting Time 5 assessment and locomotion (controlling for Time 4 levels of each trait). Michelangelo model variables failed to predict change over time in either assessment or locomotion ( $\beta$ s ranged from  $-.06$  to  $.05$ , all *ns*). These results increase confidence that our findings reflect the causal effects of assessment and locomotion on model variables.

### **Within-person and across-partner interactions of assessment with locomotion?**

Do assessment and locomotion interact in shaping Michelangelo model variables, either as within-person combinations or as across-partner combinations? Assessment and locomotion scores are largely independent (within-person  $r$ s at Times 4 and 5 = .13 and .01). The across-partner correlations of assessment with locomotion revealed that (i) males' assessment scores are independent of their female partners' assessment and locomotion scores (across-partner  $r$ s at Times 4 and 5 ranged from  $-.03$  to  $.12$ , all  $n$ s); and (ii) males' locomotion scores are independent of their female partners' assessment and locomotion scores (across-partner  $r$ s at Times 4 and 5 ranged from  $-.14$  to  $.08$ , all  $n$ s). In short, all possible combinations of within-person and across-partner low versus high assessment and locomotion exist. These facts beg the question(s): As within-person and across-partner combinations, do individual differences in assessment and locomotion interact in shaping key model variables? For example, is high assessment less problematic (or even beneficial) when combined with high locomotion?

To explore such possibilities, we regressed each of five criteria – perceived partner affirmation of self, self movement toward ideal, self affirmation of partner, perceived partner movement toward ideal, and dyadic adjustment – onto self's assessment, self's locomotion, partner's assessment, partner's locomotion, and all 11 within-person and across-partner interactions. These analyses revealed that the effects of assessment and locomotion are largely additive: Fifteen of 20 main effects were significant (75%), whereas only seven of 55 interactions were significant (13%) and only 1 of 25 three- or four-factor interactions was significant (4%). In general, these analyses revealed main effects – one's own or a partner's high assessment is problematic, whereas one's own or a partner's high locomotion is beneficial. Beyond this, the few significant interactions suggested that (i) high assessment is more problematic for low locomotors than high locomotors; (ii) high assessment is more problematic to the extent that the partner scores low in locomotion; and (iii) high locomotion is particularly beneficial when the partner likewise scores high in locomotion.

## **Discussion**

The present research examined how individual differences in assessment and locomotion relate to the Michelangelo phenomenon. Our findings replicated earlier results regarding key components of the Michelangelo process (Drigotas et al., 1999; Rusbult et al., 2005). Extending earlier work, our findings also shed light on how self-regulatory dispositions color this process. This work thereby bridges person-focused and relationship-focused work by examining the *interpersonal*-regulation functions of *self*-regulation dispositions.

### **Assessment, locomotion, and the Michelangelo phenomenon**

Merely thinking about a close partner who would want one to do well on a task influences people's persistence and performance on goal-relevant activities (Shah, 2003). Our work extends such findings in two important respects: First, this work reveals that assessment and locomotion orientation

play an important role in the Michelangelo phenomenon. And second, this work reveals the interpersonal character of these traits, demonstrating that assessment and locomotion are relevant to understanding not only (i) how individuals select, pursue, and achieve their own goals, but *also* to (ii) whether individuals elicit their partners' affirmation of their goal pursuits, and (iii) whether individuals affirm their partners, thereby promoting their partners' goal pursuits.

**Self as target of the sculpting process.** As predicted, targets with greater locomotion orientation are more amenable to partner affirmation – they are grateful, easy stones to sculpt. Locomotors perceived that their partners were more affirming, experienced greater movement toward their ideals, and reported greater couple wellbeing. (Indeed, self movement toward ideal was shaped solely by locomotion; the assessment association was nonsignificant.) Mediation findings suggest that (i) locomotors enjoy greater movement toward their ideals in part because they elicit greater partner affirmation; and (ii) locomotors enjoy healthier relationships in part because they elicit greater affirmation and enjoy greater movement toward their ideals. Locomotor targets held relatively more realistic goals, elicited more affirming behavior from partners, and were more receptive to and felt more satisfied with their partners' affirmation.

In contrast, targets with greater assessment orientation are less responsive to partner affirmation – they are difficult stones, and give their sculptors a hard time. Assessment-oriented targets perceived that their partners were not particularly affirming and reported lower couple wellbeing. Mediation findings suggest that assessors have poorer relationships in part because they elicit less affirmation from their partners. Assessor targets selected goals that were difficult to attain, were unreceptive to and inconsiderate of partners' encouragement, elicited destructive forms of affirmation from their partners, and were dissatisfied with their partners' affirmation.

**Self as sculptor.** As predicted, sculptors with greater locomotion orientation are skilled sculptors, able to bring out the best in their partners. Locomotion-oriented sculptors reported that they were more affirming of targets, perceived that their partners enjoyed greater movement toward their ideals, and reported greater couple well-being. Mediation findings suggest that (i) locomotors' partners enjoy greater movement toward their ideals in part because locomotors are more affirming; and (ii) locomotors enjoy healthier relationships in part because they are more affirming and their partners enjoy greater movement toward their ideals. Locomotor sculptors perceived the target's goals as beneficial, were encouraging of and involved in targets' pursuits, provided constructive criticism, and felt that targets were satisfied with their support. Locomotion-oriented sculptors thereby created an environment that facilitated targets' growth.

In contrast, assessment-oriented sculptors reported that they were less affirming of targets, perceived that their partners experienced less movement toward their ideal selves, and reported poorer couple wellbeing. Mediation

findings suggest that assessors' partners experience less movement toward their ideals – and their relationships are of poorer quality – in part because assessors are not particularly affirming. Assessor sculptors disapproved of target goals and regarded them as difficult, were critical and discouraging of the target's goal pursuits, described targets as unreceptive and neglectful, and felt that targets were dissatisfied with their behavior. In short, they created an environment that inhibited or obstructed targets' goal pursuits.

**Longitudinal findings.** Despite the challenging character of residualized lagged analyses, longitudinal findings supported our model. Locomotion orientation predicted increases over time in all five model variables – one's own and the partner's affirmation of the other, one's own and the partner's movement toward the ideal self, and dyadic adjustment. And earlier assessment orientation predicted declines over time in three of five variables – perceived partner affirmation, self movement toward ideal, and dyadic adjustment. In contrast, Michelangelo variables did not predict change over time in self-regulatory dispositions. These findings are consistent with the claim that individual differences in assessment and locomotion are causes, not effects. These findings also illustrate how self-regulatory dispositions set interpersonal processes into play in such a manner as to enhance or impair couple well-being.

### Strengths and limitations

Before closing we should note several limitations of this work. First, we examined goals that are related to the ideal self – we did not examine other types of goals, such as ought-self goals. It remains to be seen whether our findings extend to other types of goals, or whether the effects of assessment and locomotion are greater to the extent that goals are ideal-oriented. Second, future work should determine whether processes paralleling those observed for locomotion and assessment might also be evident for self-regulatory traits that emphasize approach versus avoidance such as promotion and prevention orientation (Higgins, 1996) or to situational self-regulatory variables such as deliberative and implemental mind set (Gollwitzer & Bayer, 1999).

A third limitation is that our findings rest on self-report data – not only on individuals' reports of their own affirmation and movement toward ideal, but also on their reports of the partner's affirmation and movement toward ideal. Do our self-report variables reflect reality? For example, are the partners of high locomotors *really* affirming, or do locomotors merely *perceive* them as affirming? For some constructs we obtained parallel reports from partners. Analyses examining the associations of assessment and locomotion with *partner*-report measures revealed good convergence (e.g., significant associations with *partners'* reports of affirmation, movement toward ideal, several behavioral mechanisms), suggesting that our findings to some degree reflect *real* phenomena in relationships and are not merely a construction of the perceiver.

We have already mentioned several strengths of this work: Our longitudinal design allowed us to explore whether self-regulatory traits account for change over time in key criteria. Also, we studied participants with real goals, in the context of real interactions with real partners. This fact not only enhances the external validity of our findings but also allowed us to examine the interpersonal character of goal pursuits, studying the motives and behavior of real partners who affirmed one another to a greater or lesser degree. Moreover, this is the first work regarding the Michelangelo phenomenon to examine both self-as-target *and* self-as-sculptor perspectives, and is the first to examine the behavioral mechanisms underlying affirmation and movement toward the ideal self. And finally, this work highlights the importance of dispositional interdependence: A higher level of interdependence exists beyond outcome interdependence – partners are also interdependent in the individual dispositions that shape each person's behavior.

### **Directions for future research**

We might also note some fruitful directions for future research: First, future work should examine how and why assessment and locomotion exert independent effects on personal growth and couple wellbeing beyond partner affirmation. What are the other routes by which these traits affect wellbeing? Second, it would be interesting to explore possible trade-offs between investment in the self and investment in one's relationship. Given that assessment is an absorbing, effortful orientation, high assessors may have few resources available for investment in their relationships (Baumeister, Bratslavsky, Muraven, & Tice, 1998). And third, future work should continue to examine interaction effects of assessment with locomotion. Prior studies revealed inconsistent evidence of within-person interactions, and did not explore across-partner interactions (Kruglanski et al., 2000); our exploratory analyses revealed only suggestive evidence of such interactions. Future research should continue to examine the precise conditions under which these dispositions may interact in yielding benefits versus decrements for individuals and for couples.

### **Conclusion**

The present research provides consistent evidence regarding the role of self-regulatory traits in shaping individuals' pursuit of their own goals and ideals, as well as in helping partners pursue their goals and ideals. As such, this work highlights the role of the self-regulatory system of personality in shaping important relational processes, and highlights the importance of interdependence by demonstrating that individual-level traits exert effects not only on individual-level processes, but also on partners' affirmation of the self and on partners' own growth. Moreover, this work illuminates the Michelangelo phenomenon from the point of view of both self-as-target and self-as-sculptor and begins to identify some of the behavioral mechanisms

that may account for the phenomenon. As such, the present work replicates and extends prior research in important ways, suggesting that it is important for partners to 'do the locomotion' not only to promote their own personal growth, but also to promote their partners' growth and the well-being of their relationships.

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