

Self-complexity and socio-emotional adjustment to a romantic event in early adulthood

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Abstract

Self-complexity, the extent that people experience themselves as having a number of distinct and meaningful social roles, may have implications for young adults' socio-emotional adjustment to romantic life events. Based on prior research, we hypothesized that participants who reported lower self-complexity would have worse adjustment to a negative event (not having a date on Valentine's Day) but better adjustment to a positive event (having a date). Participants ($N = 325$) completed measures of self-complexity and depression symptom severity at study entry. Approximately a month later, at the end of the day on Valentine's Day, they completed a measure of emotion-regulation strategies and a reassessment of depression symptom severity. The hypothesized interaction was statistically significant; self-complexity was associated with better emotion-regulation ($R^2 = .15$, $p < .001$) and depression outcomes ($R^2 = .05$, $p = .001$) for non-daters, but worse outcomes for daters. Our findings suggest that self-complexity is related to self-regulation and has implications for adjustment to a range of life events.

Keywords

Coping, depression, emotions, personality, self-concept

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Understanding how people respond to interpersonal life events is important for facilitating adjustment throughout the life span. While many types of relationships are important across human development, romantic relationships gain particular importance during early adulthood (Erikson, 1959; Scales *et al.*, 2016) and can influence well-being during and after this stage of development (Ramsey & Gentzler, 2015). Individuals at this juncture face a barrage of romantic challenges related to developing intimacy (e.g., dating, balancing priorities, resolving conflicts) and enduring isolation (e.g., loneliness, rejection, breakups; Breitenstein, Milek, Nussbeck, Davila, & Bodenmann, 2018; LeFebvre, Blackburn, & Brody, 2015; Vannier & Sullivan, 2017). People differ substantively in how they adjust to these romantic life events (Marshall, Bejanyan, & Ferenczi, 2013; Roberson, Norona, Fish, Olmstead, & Fincham, 2017; Zhang & Chen, 2017), and previous research has suggested that the organization of an individual's self-concept may determine whether individuals handle these events effectively (McConnell, Strain, Brown, & Rydell, 2009). This investigation was designed to examine how the self-concept is related to socio-emotional adjustment to romantic life events faced in early adulthood.

Self-psychology research suggests that how people adjust to life events may depend on their level of self-complexity—the extent to which individuals experience themselves as having a number of distinct, meaningful social roles (e.g., friend, athlete, artist, teacher; Linville, 1987). Researchers have often differentiated between negative life events, situations generally viewed as negative or distress evoking, and positive life events, situations that are generally desirable or uplifting (Anderson & Arnoult, 1989; McConnell, Rydell, & Brown, 2009; Rafaeli-Mor & Steinberg, 2002; Selye, 1975). Early research on the relationship between self-complexity and adjustment to life events focused on the affective extremity hypothesis, the idea that those with lower self-complexity respond to life events with greater variation in affect and self-appraisal than those with higher self-complexity (Linville, 1985). For example, when an individual has few social roles, stress in one role may greatly affect their overall emotional adjustment. Conversely, when an individual has many distinct social roles, stress in one role may have no or little effect on overall adjustment. In initial experimental studies where the affective extremity hypothesis was first proposed, increased self-complexity was associated with decreased variability in affect in response to both positive (successful completion of performance task) and negative (failed completion of performance task) daily life events (Linville, 1985; Niedenthal, Setterlund, & Wherry, 1992) and lower vulnerability to adverse consequences of stressful events (Linville, 1987).

Building on Linville's work, follow-up studies over the past 30 years have focused largely on the beneficial aspects of self-complexity and demonstrated that higher self-complexity is associated with generally positive psychological outcomes in student and community samples. These outcomes include higher self-esteem (Luo & Watkins, 2009; Lutz & Ross, 2003; Steinberg, Pineles, Gardner, & Mineka, 2003), more effective coping strategies (Duhachek & Kelting, 2009; Hannah, Balthazard, Waldman, Jennings, & Thatcher, 2013; Luo & Watkins, 2009), and better mental health (Chiu, Chang, & Hui, 2017; Haslam *et al.*, 2008; Sönderlund, Morton, & Ryan, 2017). In particular, increased self-complexity seems to be associated with increased adaptability and reduced distress in response to a range of negative events (Brown & Rafaeli, 2007; Dixon & Baumeister,

1991; Evans, 1994; Matthews, 2011; Morgan, 1994; Niedenthal et al., 1992; Slone & Roziner, 2013). However, a handful of other studies have shown the opposite effect: that *lower* self-complexity is related to higher well-being (Chiu et al., 2017; Clifford, Hitchcock, & Dalgleish, in press; McConnell et al., 2005; Woolfolk, Novalany, Gara, Allen, & Polino, 1995). Given these contradictory findings, the present study drew on Linville's (1985, 1987) original hypothesis and examined whether contextual factors, namely whether an individual had experienced a negative versus positive life event, could moderate the direction of these associations.

One meta-analysis attempted this, showing that in studies involving negative events, lower self-complexity was associated with worse emotional adjustment, whereas in studies involving positive events, lower self-complexity was associated with better emotional well-being (Rafaeli-Mor & Steinberg, 2002). Although mean effect sizes in that meta-analysis were weak due to substantial heterogeneity across studies, those findings suggest that self-complexity could buffer the effects of negative events and diffuse the benefits of positive events. In addition, the findings suggest that the relationship between self-complexity and socio-emotional adjustment depends upon whether individuals are experiencing positive or negative events. However, there is a need for more follow-up studies with prospective designs explicitly testing this hypothesis in response to both negative and positive events. One study (McConnel et al., 2009) found that self-complexity was associated with better mood outcomes among participants randomly assigned to receive negative feedback about themselves, whereas self-complexity was associated with worse mood among participants who received positive feedback. We believe that utilizing a real-world setting and facilitating real-time data collection would be a unique contribution to this literature, providing an opportunity to demonstrate an effect outside of the laboratory and contribute to the generalizability of the findings.

The present investigation used a brief prospective design to examine the relationship between self-complexity and later socio-emotional adjustment experienced by young adults in reaction to a romantic life event. We chose Valentine's Day as the romantic event of interest because our prior data (Hoerger, 2012) suggested that, on average, it is a positive event for daters and a negative event for non-daters. In both cases, the holiday has been shown to evoke strong emotions in young adults and reveal individual differences in emotion-regulation strategies (Morse & Nueberg, 2004). In examining reactions to Valentine's Day, we focused on two indicators of socio-emotional adjustment thought to be influenced by self-complexity: situation-specific emotion-regulation strategies and changes in depression symptom severity (Cohen, Spiegler, Young, Hankin, & Abela, 2014; Dixon & Baumeister, 1991; Duhachek & Kelting, 2009; Luo & Watkins, 2009; McConnell, Strain, et al., 2009). Our investigation used data collected as a part of a broader study on Valentine's Day (Hoerger, 2012; Hoerger, Quirk, Chapman, & Duberstein, 2012) and is unique from that research because it used previously unanalyzed qualitative responses to questions measuring self-complexity and examined depression outcomes on Valentine's Day. Although the majority of past research has evaluated self-complexity using a version of Linville's (1985) self-descriptive card-sorting task (e.g., Brown & Rafaeli, 2007; Chiu et al., 2017; Clifford et al., in press; Matthews, 2011; McConnel, Strain, et al., 2009), we designed a *de novo* assessment

specifically for this study (see Method) that was intended to be efficient and conceptually similar. In line with previous literature (Linville, 1985; McConnel et al., 2009; McConnel, Strain, et al., 2009; Rafaeli-Mor & Steinberg, 2002), we hypothesized a self-complexity by event interaction, such that self-complexity would predict better socio-emotional adjustment for non-daters and worse adjustment for daters.

Method

Participants and procedure

Participants were students ($N = 325$; age: $M = 19.8$ years old, $SD = 2.1$; gender: 80% female; race: 93% White) at a large Midwestern university who completed study measures as a part of a broader study (see Hoerger et al., 2012). In mid-January, participants ($N = 339$) completed measures of demographics, self-complexity, and current depression symptom severity. Then, a month later, on Valentine's Day (after 8 pm), they completed a qualitative measure of emotion-regulation strategies, a follow-up measure of depression symptom severity, and indicated whether or not they had a date that day. Participants ($N = 325$) who provided complete data at both time points were included in our analyses. Some participants reported having a date (daters: $n = 88$, 27%), which was defined as a positive event, and most did not have a date (non-daters: $n = 237$, 73%), which was defined as a negative event. Relationship status was associated, though not synonymous, with having a date on Valentine's Day, $\chi^2(1, N = 325) = 45.19, p < .001$. Sensitivity analyses examined whether findings were comparable across relationship status and other demographic variables. All measures were completed online via SurveyMonkey.com in order to facilitate real-time data collection (Hoerger & Currell, 2012).

Measures

Self-complexity. Acknowledging the variety of strategies for measuring self-complexity, several studies have identified the importance of directly assessing the number of distinct social role categories participants report experiencing (Rafaeli-Mor & Steinberg, 2002; Rafaeli-Mor, Gotlib, & Revelle, 1999). Accordingly, participants completed an open-ended response task asking about their social roles, and a team of raters quantitatively coded these qualitative remarks. Specifically, at study entry, participants were given detailed task instructions and then asked brief qualitative questions about their most important social roles. The instructions provided to participants defined a social role as "an aspect or a piece of your identity that has unique behaviors, responsibilities, and obligations (e.g., 'uncle' or 'golfer')." Participants were also given a word bank of 50 common social roles, such as "classmate," "friend," and "worker." They were asked to list, in rank order, the 10 most important social roles they currently experience in their life, and the instructions stated that they could use terms from the word bank, other types of social roles they identified on their own, or more specific social roles than the examples provided. For example, one participant listed the following 10 social roles: boyfriend, student, son, roommate, athlete, companion, classmate, worker, writer, and

staff member. In contrast to prior studies, we focused on the number of distinct social roles within a rank list of 10. This was in line with findings that suggested the measurement of self-complexity should focus on the overlap between social roles rather than the number of roles endorsed (Pilarska & Suchańska, 2015).

Past research has largely used Linville's (1985) card-sorting task to operationalize self-complexity, which defines a highly self-complex individual as someone who is able to (a) identify multiple domains of social roles and (b) use unique adjectives and attributes to describe each self-identified domain. Instead of that two-dimensional approach, this study focused solely on the dimension of overlap, measuring the repetition of social role categories in a participant's list of 10. More recent studies have begun to move away from measuring self-complexity as the distinctness of traits used to describe each domain (Linville's card-sorting task) and have instead attempted to measure the number of independent, non-overlapping domains (Duhachek & Kelting, 2009; Haslam et al., 2008; Luo, Watkins, & Lam, 2009; Sønderslund et al., 2017). The rationale is that the independence of one's social roles is not necessarily related to whether or not each role is described in a distinct way (Luo et al., 2009). For example, an individual may be able to recognize her role as a daughter and her role as a worker as distinct, non-overlapping self-domains, but might still apply attributes such as "intelligent" or "achievement" to both domains. Under Linville's operationalization, this would lead to a lower self-complexity score, whereas under our operationalization the individual might have a higher self-complexity score due to the fact that "daughter" and "worker" would be categorized in two different domains. However, whereas past studies asked participants to self-report their perceived degree of overlap among self-identified domains (Duhachek & Kelting, 2009; Haslam et al., 2008; Luo et al., 2009; Sønderslund et al., 2017), we enlisted the help of several study team members to first identify distinct domains based on open-ended qualitative data, and then categorize participants' responses based on those domains.

In our study, participants were defined as having greater self-complexity if they reported a greater number of *meaningfully different* social roles. After reviewing each participant's list of social roles in detail, we identified 16 meaningful domains: athlete, creative role (e.g., artist, writer), family member, friend, group member, helper, individual, pet owner, religious role, roommate (or neighbor), sexual partner, significant other, student, teacher, worker, and other. A team of six raters, including four psychology post-graduates and two clinical psychologists, classified participants' responses along these domains (e.g., *daughter* and *cousin* were classified as "family member," and *student* and *scholar* were classified as "student," etc.). Inter-rater agreement was excellent across 19,500 total ratings (325 participants \times 10 social roles \times 6 raters), with an intra-class correlation (ICC) of .98; inter-rater discrepancies were resolved by consensus.

Emotion-regulation strategies. Participants' emotion-regulation strategies were quantitatively coded based on their responses to a different open-ended question administered on Valentine's Day, which asked participants to outline the activities and events of their day (Mdn = 29, Interquartile range (IQR) = 18–47 words). For example, within these responses, participants described that they "drank wine alone," "slept all day because

[there was] no reason to stay up for anything,” “exchanged gifts,” “socialized with friends,” “had a bit of a fight,” and “wore fancy dresses and had a good time.” As a part of an emotion-regulation measure validation study (see Hoerger, 2012), participants’ responses were reviewed in detail, and four overlapping dimensions were identified as salient: Social Problem Solving (skills in managing difficult interpersonal situations), Behavioral Activation (active engagement in activities and events), Negative Rumination (reflecting on unpleasant aspects of the day), and Isolative Withdrawal (spending time alone). A team of eight raters quantitatively coded participants’ qualitative responses along each of these four dimensions, using a scale from -3 (*strongly disagree*) to $+3$ (*strongly agree*). Across 10,400 total ratings (325 participants $\times 4$ domains $\times 8$ raters), inter-rater agreement was excellent, $ICC = .93$. Finally, acknowledging potential overlap, ratings were averaged across the four domains (after reverse-coding Negative Rumination and Isolative Withdrawal) to yield a composite indicator of effective emotion-regulation ($\alpha = .91$).

Depression symptom severity. Participants rated their depression symptom severity at study entry ($\alpha = .89$) and again on Valentine’s Day ($\alpha = .90$) using the 20-item Center for Epidemiologic Studies Depression scale (CES-D; Radloff, 1977). They rated the extent to which they were experiencing symptoms of depression (e.g., “I had crying spells”), using a scale from 0 (*rarely or none of the time*) to 3 (*most of the time*). A total score for depression symptom severity was computed by summing each of the 20 items, yielding a range of possible scores from 0 to 60. In our sample, actual scores ranged from 1 to 48 at study entry ($M = 14.52$, $SD = 9.00$) and from 0 to 43 at follow-up ($M = 12.33$, $SD = 8.87$). In prior research, the CES-D has demonstrated construct validity, predictive validity, and favorable item discrimination compared to the Beck Depression Inventory (e.g., Zich, Attkisson, & Greenfield, 1990).

Analytic approach

Self-complexity was operationalized using the Index of Qualitative Variation (IQV; see Kader & Perry, 2007; Kleit & Carnegie, 2011), a measure of categorical dispersion. The IQV can range from 0 (complete homogeneity) to 1 (complete heterogeneity). In the current investigation, the IQV represented the probability that two social roles randomly selected from a given participant’s list would fall within different domains. Participants whose social roles had less repetition and spanned a greater number of domains received a higher IQV, indicating greater self-complexity.

In analyses, we examined descriptive statistics for the frequency and dispersion of participants’ social roles across domains and examined the main effects of self-complexity (IQV) and dating status (0 = non-dater, 1 = dater) on effective emotion-regulation as well as changes in CES-D depression symptom severity from study entry to Valentine’s Day ($M = -2.19$, $SD = 6.23$, range = -34.00 to $+18.00$). Next, we examined the self-complexity by dating status interaction in predicting emotion-regulation strategies and depression outcomes. To clarify significant interaction effects, subgroup analyses were conducted for daters and non-daters to examine self-

Table 1. Self-identified social role domains most important to college student participants.

	Frequency listed as top social role	Frequency listed within top 10 social roles
Social role domain	Count (%)	Count (%)
Family member	175 (53.8)	954 (29.4)
Student	43 (13.2)	504 (15.5)
Friend	31 (9.5)	416 (12.8)
Worker	3 (0.9)	241 (7.4)
Significant other	31 (9.5)	199 (6.1)
Helper	3 (0.9)	195 (6.0)
Roommate (or neighbor)	1 (0.3)	167 (5.1)
Sexual partner	3 (0.9)	92 (2.8)
Creative role (e.g., artist, writer)	4 (1.2)	87 (2.7)
Religious role	19 (5.8)	82 (2.5)
Athlete	1 (0.3)	77 (2.4)
Pet owner	1 (0.3)	75 (2.3)
Group member	0 (0.0)	34 (1.0)
Teacher	0 (0.0)	29 (0.9)
Individual	6 (1.8)	9 (0.3)
Other	4 (1.2)	89 (2.7)
Total	325 (100.0)	3,250 (100.0)

Note. $N = 325$. Each participant made an ordered list of their top 10 social roles. A team of raters reviewed all 3,250 of these qualitative responses and reliably coded each response into 1 of 16 salient social role categories.

complexity's relationship with effective emotion-regulation, each of the four domains of emotion-regulation strategies, and changes in depression symptom severity.

Finally, sensitivity analyses were conducted to examine the stability of findings across analytic assumptions. For example, self-complexity was operationalized in several ways: the IQV, the total number of domains of social roles listed (from the entire list, the top five social roles, and the top three roles), and the number of times a participant repeated their most common social role category (reverse coded). Of these, the IQV had the highest convergent correlations (see Online Supplementary Table 1 for correlation matrix). Additionally, principal component analysis (PCA) was used within each subgroup (daters and non-daters) to linearly combine all dependent variables (depression symptom severity and up to four measures of coping strategies) that had statistically significant zero-order findings into a single overall indicator of socio-emotional adjustment. We examined the correlation between self-complexity and socio-emotional adjustment in each subgroup (daters and non-daters).

Results

Descriptive overview

Participants' social role domains are summarized in Table 1, with family member, student, and friend being the most common roles. Their lists of social roles spanned an

Table 2. Correlations between self-complexity and socio-emotional adjustment on Valentine's Day differ among daters and non-daters.

Outcome measure	Daters (<i>n</i> = 88)			Non-daters (<i>n</i> = 237)		
	<i>M</i>	<i>SD</i>	Correlation (<i>r</i>) with self-complexity	<i>M</i>	<i>SD</i>	Correlation (<i>r</i>) with self-complexity
Effective emotion-regulation	4.85	2.68	-.19	1.77	4.10	.20**
Social problem solving (+)	1.09	0.97	-.29**	0.52	1.00	.18**
Behavioral activation (+)	1.45	0.60	-.07	0.47	1.16	.22***
Negative rumination (-)	-0.87	1.11	.19	-0.22	1.11	-.15*
Isolative withdrawal (-)	-1.44	0.51	-.03	-0.58	1.30	-.18**
Depression symptom severity (Δ)	-3.49	6.81	.24*	-1.70	5.94	-.13*

Note. *N* = 325. (+) = effective emotion-regulation strategy; (-) = ineffective emotion-regulation strategy; (Δ) = change; *SD* = standard deviation; CES-D = Center for Epidemiologic Studies Depression. The four emotion-regulation scales had a possible range from -3 to +3, with higher numbers indicating more use of the emotion-regulation strategy. Effective emotion-regulation is the sum of the four emotion-regulation indicators, after reverse coding ineffective emotion-regulation strategies. Depression symptom severity is the change in CES-D scores from study entry to Valentine's Day, with higher scores reflecting increases in depression severity.

p* < .05; *p* < .01; ****p* < .001.

average of 6.67 social role categories (*SD* = 1.19; ranging from 3 to 9 categories listed), meaning that some participants were very low on self-complexity (only three meaningful categories) and others high on self-complexity (identifying 9 meaningful categories). The IQV (a composite indicator of self-complexity) was an average of .85 (*SD* = 0.06, ranging from 0.62 to 0.93 across participants), indicating there was an 85% chance that two social roles randomly selected within a participant's list would fall within different categories.

Effective emotion-regulation strategies

The zero-order correlation between self-complexity and effective emotion-regulation was $r = .18$, $p = .001$, and daters experienced more effective emotion-regulation than non-daters, $d = .83$, $t(323) = 6.53$, $p < .001$. However, these main effects were qualified by a hypothesized interaction that was statistically significant. In regression, self-complexity ($\beta = .10$, $p = .08$), dating status ($\beta = .35$, $p < .001$), and their interaction ($\beta = -.14$, $p = .01$) predicted effective emotion-regulation, $R^2 = .15$, $p < .001$. For daters, self-complexity was associated with less effective emotion-regulation in the domain of social problem solving; in contrast, for non-daters, self-complexity was associated with more effective emotion-regulation across all domains (see Table 2; see Online Supplementary Figure 1 for an interaction plot).

Depression symptom severity

Depression symptom severity scores reduced on average from study entry ($M = 14.52$, $SD = 9.00$) to follow-up ($M = 12.33$, $SD = 8.87$), $d = .25$, $t(323) = 6.53$, $p < .001$. In

particular, 64% of participants experienced a reduction in depression symptom severity during the study period, whereas 24% experienced an increase. The zero-order correlation between self-complexity and changes in depression symptom severity was non-significant, $r = .06$, $p = .29$. Daters (study entry: $M = 13.22$, $SD = 9.25$; Valentine's Day: $M = 9.73$, $SD = 8.31$) experienced more favorable changes in depression symptom severity than non-daters (study entry: $M = 15.00$, $SD = 8.87$; Valentine's Day: $M = 13.30$, $SD = 8.90$), $d = .29$, $t(323) = 2.31$, $p = .02$. These findings were also qualified by a hypothesized interaction that was statistically significant. In regression, self-complexity ($\beta = .01$, $p = .87$), having a date ($\beta = .16$, $p = .01$), and their interaction ($\beta = .18$, $p = .01$) were used to predict reductions in depression symptom severity, $R^2 = .05$, $p = .001$. Self-complexity was associated with worse depression outcomes for daters and better depression outcomes for non-daters (see Table 2; see Online Supplementary Figure 2 for an interaction plot).

Sensitivity analyses

In a sensitivity analysis, PCA was used to derive a summary indicator of socio-emotional adjustment, based on the linear combination of dependent variables that had statistically significant findings for daters (social problem solving and depression symptom severity) and non-daters (all four coping strategies and depression symptom severity). The correlation between self-complexity and this overall indicator was examined in each subgroup. Results were consistent with our primary analyses, showing that self-complexity predicted worse socio-emotional adjustment for daters and better adjustment for non-daters (see Online Supplementary Table 2).

Discussion

This investigation describes how self-complexity moderates young adults' socio-emotional adjustment to romantic events on Valentine's Day. As hypothesized based on prior research (McConnel et al., 2009; McConnel, Strain, et al., 2009; Rafaeli-Mor & Steinberg, 2002), lower self-complexity was predictive of worse socio-emotional adjustment in the context of a negative event (not having a date on Valentine's Day), and better adjustment in the context of a positive event (having a date). The investigation was unique in that it involved quantitatively coding thousands of qualitative responses and used a prospective design to examine adjustment to a developmentally salient real-world event. Our design provides a conceptual replication of past research conducted in the laboratory that used a more traditional operationalization of self-complexity. Findings hold direct implications for the role of self-complexity in emotion-regulation with positive and negative events.

Our results revealed an interaction effect, in which self-complexity was either beneficial or burdensome depending on whether the experienced event was negative or positive, respectively (McConnell et al., 2009; Rafaeli-Mor & Steinberg, 2002). In partial support of the buffering hypothesis (Linville, 1985, 1987), lower self-complexity was associated with less effective emotion-regulation and worse depression outcomes for those experiencing the negative event of being dateless on Valentine's Day.

Consistent with the buffering hypothesis, awareness of a broad range of social roles may diffuse the impact of any particular negative event. Perhaps this awareness leads to the identification of more effective or a greater number of social support sources, boosting social problem solving and behavioral activation as viable emotional regulation strategies in the face of adversity, and leading to less isolative withdrawal. Additionally, self-complexity may capture a tendency toward cognitive flexibility (Lutz & Ross, 2003), which could be a protective factor against engaging in negative rumination (McCracken, Barker, & Chilcot, 2014; Owens & Deerkshan, 2013). On the other hand, results also demonstrated that lower self-complexity was associated with more effective emotion-regulation and better depression outcomes for those experiencing the positive event of having a date on Valentine's Day. These results are consistent with previous research suggesting that lower self-complexity leads to better adjustment to positive events (McConnell et al., 2005, 2009; McConnel, Strain, et al., 2009; Rafaeli-Mor & Steinberg, 2002), perhaps because attention to a broader range of social roles reduces engagement in enjoyable aspects of the present situation or reduces attention and effort toward solving stressful aspects of positive situations. Those high in self-complexity may also experience more difficulty reconciling competing demands.

The present study had several strengths and limitations. Strengths included our focus on an affectively charged event developmentally salient for college students, the high reliability in the coding procedures, and the collection of real-time adjustment data on Valentine's Day. Limitations included our use of a non-clinical, relatively homogenous sample of college students, and our focus on one particular type of romantic event. Therefore, generalizability to clinical samples, older and more diverse populations, and other types of life events warrant further study. Our study also used a novel, untested measure that focused on one dimension of self-complexity, distinctness between social roles, and did not focus on the number of social roles. Therefore, our findings on self-complexity may be specific to the one-dimension hypothesis of self-complexity. Additionally, our measure of self-complexity may have been unable to differentiate between some subtle variations in complexity (e.g., a "sister, granddaughter" would be coded as no more complex than a "sister, sibling" because all involved family roles, despite that the latter seems less complex). Thus, to the extent our coding procedures were insensitive to subtle differences, our study might underestimate real-world effects.

This work has implications for future studies exploring conceptual issues in self-psychology, experimental manipulations, and longer term outcomes. To begin, reviews have called attention to the need for greater conceptual clarity in "self" research (Damian & Robins, 2012; Klein, 2012). The present findings suggest that self-complexity is in some way associated with the self-regulation of emotions in response to events, and future studies might employ factor analysis to clarify how different "self" constructs (e.g., self-representation, self-awareness, self-differentiation, self-esteem, etc.) are related. Additionally, future studies might examine potential experimental manipulations for modifying one's level of role awareness and emotional reactivity, which have been found to be associated with greater well-being (Guerrero & Lysaker, 2013). Follow-up research should also be conducted examining the developmental underpinnings that affect emotion-regulation in individuals high and low in self-complexity, with particular attention to social problem-solving skills. For example,

perhaps individuals low in self-complexity are less likely to learn to alter their focus when confronted with social stressors, and people high in self-complexity could benefit from strategies that help them navigate competing role demands. Finally, future research might examine the relationship between self-complexity and longer term outcomes across various contexts, including relationships, education, and work, as self-complexity could have implications for adjustment to a range of life events (Cheng & Gruhn, 2014; McConnell, Shoda, & Skullborstad, 2012).

In conclusion, our study found that lower self-complexity was associated with worse adjustment to a negative life event but better adjustment to a positive life event. Future studies should aim to explore the emotion-regulation strategies employed by individuals where self-complexity proves beneficial as well as burdensome.


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Open research statement

As part of IARR's encouragement of open research practices, the author(s) have provided the following information: The data and materials used in the research are available. The data and materials can be obtained by emailing: lperry5@tulane.edu.

Supplemental material

Supplemental material for this article is available online.

References

- Anderson, C. A., & Arnoult, L. H. (1989). An examination of perceived control, humor, irrational beliefs, and positive stress as moderators of the relation between negative stress and health. *Basic and Applied Social Psychology, 10*, 101–117.
- Breitenstein, C. J., Milek, A., Nussbeck, F. W., Davila, J., & Bodenmann, G. (2018). Stress, dyadic coping, and relationship satisfaction in late adolescent couples. *Journal of Social and Personal Relationships, 35*, 770–790.
- Brown, G., & Rafaeli, E. (2007). Components of self-complexity as buffers for depressed mood. *Journal of Cognitive Psychotherapy, 21*, 310–333.
- Cheng, Y., & Grün, D. (2014). Age differences in reactions to social rejection: The role of cognitive resources and appraisals. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 70*, 830–839.

- Chiu, C. D., Chang, J. H., & Hui, C. M. (2017). Self-concept integration and differentiation in subclinical individuals with dissociation proneness. *Self and Identity*, 16, 664–683.
- Clifford, G., Hitchcock, C., & Dalgleish, T. (in press). Compartmentalization of self-representations in female survivors of sexual abuse and assault, with posttraumatic stress disorder (PTSD). *Psychological Medicine*.
- Cohen, J. R., Spiegler, K. M., Young, J. F., Hankin, B. L., & Abela, J. R. (2014). Self-structures, negative events, and adolescent depression clarifying the role of self-complexity in a prospective, multiwave study. *The Journal of Early Adolescence*, 34, 736–759.
- Damian, R. I., & Robins, R. W. (2012). Investigations into the human self: A naturalist perspective. *Social Cognition*, 30, 431–448.
- Dixon, T. M., & Baumeister, R. F. (1991). Escaping the self: The moderating effects of self-complexity. *Personality and Social Psychology Bulletin*, 17, 363–368.
- Duhachek, A., & Kelting, K. (2009). Coping repertoire: Integrating a new conceptualization of coping with transactional theory. *Journal of Consumer Psychology*, 19, 473–485.
- Erikson, E. H. (1959). Identity and the life cycle. *Psychological Issues*, 1, 1–171.
- Evans, D. W. (1994). Self-complexity and its relation to development, symptomatology and self-perception during adolescence. *Child Psychiatry and Human Development*, 24, 173–182.
- Guerrero, A. G., & Lysaker, P. H. (2013). Socially naïve self-appraisal moderates the relationship between cognitive insight and positive symptoms in schizophrenia. *Schizophrenia Research*, 141, 97–101.
- Hannah, S. T., Balthazard, P. A., Waldman, D. A., Jennings, P. L., & Thatcher, R. W. (2013). The psychological and neurological bases of leader self-complexity and effects on adaptive decision-making. *Journal of Applied Psychology*, 98, 393–411.
- Haslam, C., Holme, A., Haslam, S. A., Iyer, A., Jetten, J., & Williams, W. H. (2008). Maintaining group memberships: Social identity continuity predicts well-being after stroke. *Neuropsychological Rehabilitation*, 18, 671–691.
- Hoerger, M. (2012). Coping strategies and immune neglect in affective forecasting: Direct evidence and key moderators. *Judgment and Decision Making*, 7, 86–96.
- Hoerger, M., & Currell, C. (2012). Ethical issues in internet research. In S. Knapp, M. Gottlieb, M. Handelsman, & L. VandeCreek (Eds.), *APA handbook of ethics in psychology, vol. 2: Practice, teaching, and research* (pp. 385–400). American Psychological Association.
- Hoerger, M., Quirk, S. W., Chapman, B. P., & Duberstein, P. R. (2012). Affective forecasting and self-rated symptoms of depression, anxiety, and hypomania: Evidence for a dysphoric forecasting bias. *Cognition and Emotion*, 26, 1098–1106.
- Kader, G. D., & Perry, M. (2007). Variability for categorical variables. *Journal of Statistics Education*, 15, 1–17.
- Klein, S. B. (2012). Self, memory, and the self-reference effect: An examination of conceptual and methodological issues. *Personality and Social Psychology*, 16, 283–300.
- Kleit, R. G., & Carnegie, N. B. (2011). Integrated or isolated? The impact of public housing redevelopment on social network homophily. *Social Networks*, 33, 152–165.
- LeFebvre, L., Blackburn, K., & Brody, N. (2015). Navigating romantic relationships on Facebook: Extending the relationship dissolution model to social networking environments. *Journal of Social and Personal Relationships*, 32, 78–98.
- Linville, P. W. (1985). Self-complexity and affective extremity: Don't put all your eggs in one cognitive basket. *Social Cognition*, 3, 94–120.

- Linville, P. W. (1987). Self-complexity as a cognitive buffer against stress-related illness and depression. *Journal of Personality and Social Psychology*, 52, 663–676.
- Luo, W., & Watkins, D. (2009). Relating self-complexity to coping and adaptation with Chinese college students: A new measurement perspective. In G. Aikaterini & K. Mylonas (Eds.), *Quod Erat demonstrandum: From Herodotus' ethnographic journeys to cross-cultural research: Proceedings from the 18th international congress of the international association for cross-cultural psychology* (pp. 1–12).
- Luo, W., Watkins, D., & Lam, R. Y. (2009). Validating a new measure of self-complexity. *Journal of Personality Assessment*, 91, 381–386.
- Lutz, C. J., & Ross, S. R. (2003). Elaboration versus fragmentation: Distinguishing between self-complexity and self-concept differentiation. *Journal of Social and Clinical Psychology*, 22, 537–559.
- Marshall, T. C., Bejanyan, K., & Ferenczi, N. (2013). Attachment styles and personal growth following romantic breakups: The mediating roles of distress, rumination, and tendency to rebound. *PLoS One*, 8, e75161.
- Matthews, S. K. (2011). Self-complexity and crime: Extending general strain theory. *Justice Quarterly*, 28, 863–902.
- McConnell, A. R., Renaud, J. M., Dean, K. K., Green, S. P., Lamoreaux, M. J., Hall, C. E., & Rydell, R. J. (2005). Whose self is it anyway? Self-aspect control moderates the relation between self-complexity and well-being. *Journal of Experimental Social Psychology*, 41, 1–18.
- McConnell, A. R., Rydell, R. J., & Brown, C. M. (2009). On the experience of self-relevant feedback: How self-concept organization influences affective responses and self-evaluations. *Journal of Experimental Social Psychology*, 45, 695–707.
- McConnell, A. R., Shoda, T. M., & Skulborstad, H. M. (2012). The self as a collection of multiple self-aspects: Structure, development, operation, and implications. *Social Cognition*, 30, 380–395.
- McConnell, A. R., Strain, L. M., Brown, C. M., & Rydell, R. J. (2009). The simple life: On the benefits of low self-complexity. *Personality and Social Psychology Bulletin*, 35, 823–835.
- McCracken, L. M., Barker, E., & Chilcot, J. (2014). Decentering, rumination, cognitive defusion, and psychological flexibility in people with chronic pain. *Journal of Behavioral Medicine*, 37, 1215–1225.
- Morgan, H. J., & Janoff-Bulman, R. (1994). Positive and negative self-complexity: Patterns of adjustment following traumatic versus non-traumatic life experiences. *Journal of Social and Clinical Psychology*, 13, 63–85.
- Morse, K., & Neuberg, S. (2004). How do holidays influence relationship processes and outcomes? Examining the instigating and catalytic effects of Valentine's day. *Personal Relationships*, 11, 509–527.
- Niedenthal, P. M., Setterlund, M. B., & Wherry, M. B. (1992). Possible self-complexity and affective reactions to goal-relevant evaluation. *Journal of Personality and Social Psychology*, 63, 5–16.
- Owens, M., & Derakshan, N. (2013). The effects of dysphoria and rumination on cognitive flexibility and task selection. *Acta Psychologica*, 142, 323–331.
- Pilarska, A., & Suchańska, A. (2015). Self-complexity and self-concept differentiation—what have we been measuring for the past 30 years? *Current Psychology*, 34, 723–743.

- Radloff, L. S. (1977). The CES-d scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385–401.
- Rafaeli-Mor, E., Gotlib, I. H., & Revelle, W. (1999). The meaning and measurement of self-complexity. *Personality and Individual Differences*, 27, 341–356.
- Rafaeli-Mor, E., & Steinberg, J. (2002). Self-complexity and well-being: A review and research synthesis. *Personality and Social Psychology Review*, 6, 31–58.
- Ramsey, M. A., & Gentzler, A. L. (2015). An upward spiral: Bidirectional associations between positive affect and positive aspects of close relationships across the life span. *Developmental Review*, 36, 58–104.
- Roberson, P. N., Norona, J. C., Fish, J. N., Olmstead, S. B., & Fincham, F. (2017). Do differences matter? A typology of emerging adult romantic relationship. *Journal of Social and Personal Relationships*, 34, 334–355.
- Scales, P. C., Benson, P. L., Oesterle, S., Hill, K. G., Hawkins, J. D., & Pashak, T. J. (2016). The dimensions of successful young adult development: A conceptual and measurement framework. *Applied Developmental Science*, 20, 150–174.
- Selye, H. (1975). Confusion and controversy in the stress field. *Journal of Human Stress*, 1, 37–44.
- Slone, M., & Roziner, I. (2013). Does self-complexity moderate the effects of exposure to political violence for adolescents? *Anxiety Stress Coping*, 26(6), 659–673.
- Sønderlund, A. L., Morton, T. A., & Ryan, M. K. (2017). Multiple group membership and well-being: Is there always strength in numbers? *Frontiers in Psychology*, 8, 1038–1058.
- Steinberg, J. A., Pineles, S. L., Gardner, W. L., & Mineka, S. (2003). Self-complexity as a potential cognitive buffer among abused women. *Journal of Social and Clinical Psychology*, 22, 560–579.
- Vannier, S. A., & O'Sullivan, L. F. (2017). Passion, connection, and destiny: How romantic expectations help predict satisfaction and commitment in young adults' dating relationships. *Journal of Social and Personal Relationships*, 34, 235–257.
- Woolfolk, R. L., Novalany, J., Gara, M. A., Allen, L. A., & Polino, M. (1995). Self-complexity, self-evaluation, and depression: An examination of form and content within the self-schema. *Journal of Personality and Social Psychology*, 68, 1108–1120.
- Zhang, J. W., & Chen, S. (2017). Self-compassion promotes positive adjustment for people who attribute responsibility of a romantic breakup to themselves. *Self and Identity*, 16, 1–28.
- Zich, J. M., Attkisson, C. C., & Greenfield, T. K. (1990). Screening for depression in primary care clinics: The CES-D and the BDI. *The International Journal of Psychiatry in Medicine*, 20, 259–277.