Creative Days: A Daily Diary Study of Emotion, Personality, and Everyday Creativity

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Abstract
Each day presents an opportunity to engage in small acts of creativity. The present study aimed to understand the ecology of everyday creativity: how certain emotions may help or hinder creative pursuits and who behaves more creatively on a daily basis. We recruited a large sample of 658 young adults (17 to 25 year old; $M = 19.8$ years) who rated their creativity and their experience of eighteen positive and negative emotion states each day for 13 days using an Internet daily diary method. High activation positive emotions like feeling excited, energetic, and enthusiastic were the most favourable to everyday creativity. Young adults higher in these states reported the most creativity overall, and, on days when people experienced these states, creativity was higher than normal. Medium and low activation positive emotion states like happiness and relaxation were also beneficial to creativity, although not as strongly. Negative emotion states were unrelated to, or antagonistic with creativity. People higher in openness reported the most creativity, which was more strongly yoked to their emotions: They were more creative on emotionally positive days and less creative on emotionally negative days. These findings suggest that creative days are characterised by greater emotional zest and engagement, that open people are creative people, and that personality modulates the emotion-creativity link. Fostering feelings of engagement, zest, and greater openness to new experiences may be the keys to everyday creativity.

Keywords: creativity, emotion, openness to experience, daily diary methods, personality
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An ordinary day is heavy with opportunity. In *The Writing Life*, Annie Dillard (1989) remarked, “How we spend our days is, of course, how we spend our lives. What we do with this hour, and that one, is what we are doing” (p. 32). For creativity researchers, it’s noteworthy that people spend much of “this hour, and that one” on creative pursuits. Known as “little c” creativity and *everyday creativity* (Richards, 2007; 2009; Kaufman & Beghetto, 2009; Silvia, Beaty, Nusbaum, Eddington, Levin-Aspenson, & Kwapis, 2014), these common expressions of creativity are done by ordinary people in everyday life for their own sake, not as part of domain-changing “Big C” creative masterpieces (also called *eminent creativity*; Richards, 2009). Instead of directing feature films and writing definitive histories, people engaging in “little c” creativity make memes, knit scarves, invent recipes, and arrange Aphex Twin songs for the ukulele.

What are creative days like, and who has them? In general, methods for studying everyday life such as experience sampling, daily diaries, and other ecological assessment methods (Mehl & Conner, 2012) are uncommon in creativity research. As a result, not much is known about the daily ecology of creativity: what everyday creativity looks like in people’s idiosyncratic and variable environments. In the present research, we used daily dairy methods to examine two aspects of creative days. First, we examined the long-standing issue of emotions and creativity (Baas, De Dreu, & Nijstad, 2008): when people spent a day engaging their creative pursuits, was that day typically happy or gloomy? Second, we examined the role of personality in daily creativity: what type of people tend to spend their days on creative pursuits, and are some people more or less creative depending on their emotional state?
Emotions and Creativity

Some emotions make it easier for people to have good ideas. Since its classic early experiments (Isen, Daubman, & Nowicki, 1987), the field of emotion and creativity has consistently found that manipulating emotions can influence cognitive flexibility and insight. Most of the research has emphasized the role of positive emotions, which appear to benefit creative thought more strongly compared to negative emotions and neutral states (Baas et al., 2008). A meta-analysis of the mood and creativity literature (Baas et al., 2008) further differentiated emotions by their valence (positive vs. negative), activation level (low vs. high bodily stimulation) and regulatory focus (promotion vs. prevention; Higgins, 1997) to show that each was important for understanding the emotion-creativity link. The meta-analysis concluded that emotional states that were positive, activated, and promotion-focused (i.e., fostered approach towards a desired goal rather than avoidance of an undesired goal) were particularly likely to foster creative ideas. These included states such as feeling happy, enthusiastic, and elated.

Are these robust laboratory findings observed in everyday creativity? Are activated, approach-related positive states in daily life associated with more flexible thought and more creative activities? Biographical and interview data offer some anecdotal support. Caffeine is a stimulant that fosters alertness and positive mood in low to moderate doses (Glade, 2010) and has a reputation as a creative lubricant favored by writers who often report drinking coffee or tea while writing (Perry, 1999). Perry’s interviews with writers also suggested that they use routines and rituals to foster flow states, which are characterized by a positive feeling of challenge and focus. A recent empirical study of textile handcrafters found that their rejuvenating creative experiences were typically high in activation level and engagement (Collier & von Károlyi, 2014). At the same time, there are widely-held cultural models of people turning to creative projects to cope with distress (Becker, 2014), and some
people do use artistic hobbies as ways of venting negative feelings and dealing with stress (Parkinson, Totterdell, Briner, & Reynolds, 1996; Reynolds, 2003; 2004; Reynolds, Lim, & Prior, 2008).

One limitation of cross-sectional interview and self-report data, however, is that when people are asked to reflect about what they typically do, such as how much time they spend on creative pursuits, they are likely to draw upon their lay theories, recent memories, or bald guesses (Robinson & Clore, 2002; Schwarz, 2012). Experience sampling and daily diary methods, in contrast, repeatedly assess people over long time periods. For example, in a recent experience sampling study, we asked people what they were doing and feeling at the moment 8 times a day for 7 days (Silvia et al., 2014). People were more likely to be doing something creative at the moment when they also felt “happy” and “alert.” Creativity was unrelated to momentary negative emotions like feeling “sad” or “angry.” These results are consistent with the view that activated positive emotions foster creativity, but that study’s assessment of positive emotion was small in scale and did not capture emotions across a range of activation and regulation levels.

**Personality and Creativity**

Another open question concerns the role of personality in everyday creativity and the possible interactions between personality traits and emotional states in predicting creative days. Modern trait theories view personality traits as closely linked to mundane behaviors, whereby people’s everyday actions and choices reveal much about—and in a sense constitute (Fleeson, 2001)—their personalities. Similarly, DeYoung (2010) views traits as the probabilistic descriptions of regular patterns in everyday life that are rooted in neurobiology and shaped by evolution. For example, extraverts tend to have a more sensitive reward-system and they are more likely to act boldly, talk more, and be more assertive in their daily lives compared to their less extraverted peers. The link between personality and regularities
in everyday behavior raises the question of how personality is related to “little c” creativity and whether this relationship between positive emotion and creativity is stronger for some people than others.

Most personality traits have some relevance to creativity, such as traits associated with persevering, discerning which ideas are good, and selecting a creative domain (Fürst, Ghisletta, & Lubart, in press), but openness to experience appears to be the global, general factor associated with creativity (DeYoung, 2014; Feist, 2010; Johnson, 1994; McCrae, 1987). People high in openness to experience are curious, unconventional, and interested in artistic, cultural, and intellectual topics (Kaufman, 2013). They perform better on virtually all tasks that measure creative thought (Silvia, Nusbaum, Berg, Martin, & O’Connor, 2009), pursue creative hobbies (Wolftradt & Pretz, 2001), choose college majors and careers that let them express creativity (Silvia & Nusbaum, 2012), and have more creative achievements across the lifespan (Feist & Barron, 2003). Not surprisingly, then, people high in openness are much more likely to spend parts of their day on creative pursuits. In the week-long experience sampling study (Silvia et al., 2014), people high in openness were substantially more likely to be doing something creative at the moment.

What isn’t known is whether people high in openness have a stronger relationship between emotion and their everyday creativity. On the one hand, we could expect a stronger relationship between activated positive emotion and creativity for people high in openness who see themselves as creative people and are passionate about creative hobbies. On the other hand, one could predict that emotions like feeling enthusiastic are less important for people who spend much of their days on creative tasks, which are often driven by long-standing routines, goals, and habits. The earlier experience sampling study was unable to address this question (Silvia et al., 2014). Openness to experience did not significantly interact with any emotion to predict doing something creative, but the sample was fairly
small for finding such effects, and the assessment of positive and negative emotion didn’t
capture the activated positive domain thoroughly, so it remains an open question.

**The Present Research**

In the present research, we explored creative days: what creative days are like emotionally, and who tends to have them. A large sample of young adults took part in a two-week daily diary study. They rated their thoughts, feelings, and actions each day, including how creative they were during the day and what their emotions were like. Although we did not measure specific acts of “little-c” creativity, we provided participants with examples of creativity including the novel generation of ideas, original self-expression, art, music, and writing. We sought to build upon and go beyond past work (Silvia et al., 2014) in several respects. First, unlike past work, this study systematically assessed positive and negative emotion across a range of activation levels. People completed measures that were crafted to capture low, medium, and high activation types of daily positive affect (PA) and negative affect (NA). In doing so, we also captured a range of promotion and prevention focused states. The design thus affords a strong test of how emotions predict creativity in everyday life.

Second, we examined the role of personality in daily creativity with a much larger and broader sample. The prior study had 79 college students, around a third of whom were music majors and thus heavily involved in creative pursuits (Silvia et al., 2014). The present study had a large, expansive sample of over 650 college students, which broadened the range of personality and increased our power to find effects for traits other than openness, which have much smaller effects (Feist, 1998). Finally, we examined state-trait interactions involving emotion and personality. The large sample size and focused assessment of PA and NA should allow us to see if emotion and creativity are more tightly linked for some people than others.
Method

Participants. Participants were 658 young adults (196 men, 462 women), 17 to 25 years old ($M = 19.8, SD = 1.7$), who identified as European (79.2%), Asian (10.9%), Māori or Pacific Islander (5.3%), Indian (2.6%), or another ethnicity (2.0%). Participants were students at the University of Otago, New Zealand, who were taking part in the 2013 and 2014 waves of the Daily Life Study, a large interdiscipliary study of the daily experiences of young adults. Participants were reimbursed with partial course credit if recruited through the University of Otago Psychology Department’s experimental participation program ($N = 398, 60.5\%$) or with a small cash payment if recruited through flyers, classes, or word of mouth ($N = 260, 39.5\%$). An additional 23 participants were excluded from analysis (six participants dropped out of the study; 17 participants completed fewer than seven diary records).

Procedure. In an initial laboratory session, participants completed informed consent and computerized measures of demographic characteristics (gender, age, and ethnicity) and personality, along with other trait measures. At the end of this survey, participants entered an email address and password to access the daily diary that began the next day. For 13 days, participants completed an online daily diary accessible between 3 pm and 8 pm that included a wide range of self-report measures about their thoughts, emotions, and behaviors during the day. After completing the daily diaries, participants returned to the laboratory two weeks after their initial session for debriefing and reimbursement.

Trait measures. The initial survey included the 60-item NEO Five-Factor Inventory (NEO-FFI; Costa & McCrae, 1992), which assesses the five major factors of personality. Participants were asked to indicate whether they agreed or disagreed with each item on a 5-point scale ($1 = \text{strongly disagree}, 2 = \text{disagree}, 3 = \text{neutral}, 4 = \text{agree}, 5 = \text{strongly agree}$). Responses were averaged across the 12-items for each trait (reverse scoring where needed).
for measures of neuroticism ($\alpha = 0.854$), extraversion ($\alpha = 0.789$), openness ($\alpha = 0.741$), conscientiousness ($\alpha = 0.862$) and agreeableness ($\alpha = 0.757$).

**Daily diary measures.** Creativity was measured with a single item that we developed based on common definitions of creativity (Hennessey & Amabile, 2010); prior research used a similar question (Silvia et al., 2014). Our question was: “Overall, how creative were you today? Creativity includes coming up with novel or original ideas; expressing oneself in an original and useful way; or spending time doing artistic activities (art, music, painting, writing, etc.).” Participants responded on a 5-point Likert scale (0 = none, 1 = a little, 2 = a moderate amount, 3 = a lot, 4 = a great deal).

Positive and negative emotion was measured through an 18-item scale based on the circumplex model of affect (Barrett & Russell, 1999). Positive affect (PA) was measured across three levels of activation with three items each: high activation (energetic, enthusiastic, and excited), medium activation (happy, cheerful, pleasant), and low activation (calm, content, relaxed). The same was true for negative affect: high activation (angry, hostile, irritable), medium activation (nervous, anxious, tense), and low activation (dejected, sad, unhappy). Participants rated each adjective for how they “felt today” on a 5-point Likert scale (1 = not at all, 2 = slightly, 3 = moderately, 4 = very much, 5 = extremely). Responses were averaged across the 9-items and 3-item subscales for measures of PA ($\alpha = .895$), PA Hi ($\alpha = .729$), PA Med ($\alpha = .771$), PA Low ($\alpha = .642$), and NA ($\alpha = .760$), NA Hi ($\alpha = .630$), NA Med ($\alpha = .716$), NA Low ($\alpha = .724$). Alpha reliabilities for nested data were computed using recommended guidelines from Nezlek (2012). PA Hi, PA Med, NA Hi, and NA Low captured a range of positive and negative promotion-focused states (enthusiastic, happy, angry, and sad, respectively); PA Low and NA Med captured a range of positive and negative prevention-focused states (relaxed and anxious, respectively).
Data analysis. This micro-longitudinal design yielded a dataset with up to 13 daily observations nested within people. Our analytic approach took this nested data structure into account to understand the between- and within-person associations between emotions and creativity. Prior to analyses, we computed descriptive statistics for the aggregated daily variables in SPSS and used multilevel modeling with the Hierarchical Linear Modeling Programme (HLM; version 6.08; Raudenbush, Bryk, & Congdon, 2004) to determine the proportion of between- versus within-person variance in the daily variables using intra-class correlation coefficients (ICCs) (Raudenbush, & Bryk, 2002). For the between-person analyses, we computed Pearson correlation coefficients between the aggregated daily emotions and creativity measures, and between each personality trait and the aggregated daily creativity measure.

For the within-person analyses, we conducted a series of multilevel models using HLM. Models were constructed to determine which emotion state was the strongest predictor of increased creativity within individuals over time. We ran eight models with creativity as the level-1 outcome and each of the eight emotion states (PA, PA Hi, PA Med, PA Low, NA, NA Hi, NA Med, NA Low) as a separate level-1 predictor to generate the within-person slopes. Each emotion predictor was group-mean centered around each person’s mean to model changes around each person’s typical emotion across the 13 days. We entered gender (male = 0, female = 1) as a level-2 variable in the intercept equation only to control for the uneven distribution of gender in the sample and any gender differences in average creativity. An additional “weekend” level-1 predictor was also entered uncentered (coded 0 for Mondays – Fridays and 1 for Saturdays and Sundays) to control for possible weekend differences in creativity and emotion (Liu & West, 2015; West & Hepworth, 1991), however, this was removed from the final models because it did not modify patterns. Effect sizes were computed by calculating the percentage of variance reduction in creativity accounted for by
each emotion following recommended procedures (Raudenbush, & Bryk, 2002). We then tested whether personality moderated these within-person relationships between emotion and creativity by adding neuroticism, extraversion, openness, conscientiousness, and agreeableness (all grand-mean centered) as simultaneous level-2 predictors to the previous multilevel models. We also included gender in the level-2 intercept and slope equations to control for gender differences in creativity and personality and to test for gender differences in the within-person relationships.

Results

Descriptive Statistics

Participants completed 12 out of 13 diaries on average (90% response rate; \( M = 11.7; SD = 1.5; \) range 7 – 13). Table 1 shows the descriptive statistics for the aggregated daily and personality variables. There was a large range in self-reported creativity. At least one participant reported no creativity at all during the 13 days (min = 0.00), whereas another participant reported a high level of creativity (max = 3.62). The mean reported creativity was 1.12, which corresponded to being “a little” creative each day. The intra-class correlation (ICC) statistic for creativity indicated that under half of the observed variability in creativity occurred between participants and therefore more than half occurred within participants. ICCs for the daily emotion states were similar. Given the presence of within-person variability, it was appropriate to model within-person variance in creativity and emotion.

Insert Table 1 about here

Between-Person Associations

Table 1 shows the between-person correlations between average creativity and each averaged emotion variable. People who reported more PA, and particularly more high
activation rather than low activation PA, were more creative on average than people lower in these PA states. High activation PA accounted for 16.8% of the variance in creativity whereas low activation PA only accounted for 4.9% of the variance in creativity. NA was mostly unrelated to creativity with the exception that high activation NA (angry, hostile, irritable, all promotion-focused states) was associated with higher creativity at the between-person level.

Table 1 also shows the correlations between personality traits and creativity. People higher in openness, and to a lesser extent extraversion, were more creative than people lower in these traits. Openness accounted for 7% of the variance in average creativity. Extraversion accounted for 2% of the variance in creativity. None of the other personality variables was associated with creativity at the between-person level.

**Within-Person Associations**

Table 2 shows the within-person predictors of creativity from multilevel modeling. As hypothesized, high activation PA was the strongest predictor of daily creativity, accounting for 14% of the variance. On days with more excitement, energy, and enthusiasm, people reported being more creative compared to days when they felt this way less. Medium and low activation PA states like happy and calm also predicted creativity but to a smaller extent, accounting for 9% and 7% of creativity, respectively. High and low activation NA states like angry and sad were antagonistic to creativity, accounting for less than 5% of the variance in creativity. Medium activation NA states like anxiety had no association with creativity. Gender was significantly associated with creativity with women reporting less creativity than men, \( b(SE) = -.193(.066), p = 0.004 \).

There was significant variability around these average within-person associations (\( bs \)) shown in Table 2. The variance estimates of these within-person slopes from multilevel modeling were all significant (variances ranged from 0.046 to 0.093, all \( ps < 0.001 \)). This
heterogeneity meant that it was appropriate to test whether personality factors accounted for some of the variability in the emotion-creativity relationships.

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Insert Table 2 about here
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**Personality Moderators**

Openness moderated nearly all of the within-person patterns shown in Table 2. People higher in openness experienced significantly greater increases in creativity on days with positive emotion compared to people lower in openness. This was true when they experienced more overall PA (Open $b(SE) = .159(.040), p < .001$), high activation PA (Open $b(SE) = .130(.033), p < .001$), medium activation PA (Open $b(SE) = .134(.034), p < .001$), and low activation PA (Open $b(SE) = .124(.037), p = .001$). Figure 1 shows this pattern of moderation for PA. People in the upper 25th percentile of openness had the strongest positive relationship between daily PA and creativity compared to people in the 50th and 75th percentile. The average increase in creativity for each point increase in positive affect was .51 for the most open people, versus .40 for the least open people. Supplemental Figure 2 shows the individual regression lines (i.e., PA-creativity slopes) by levels of openness.

People higher in openness also experienced significantly greater reductions in creativity on days with negative emotion compared to people lower in openness. Their creativity went down to a greater extent on days with greater NA (Open $b(SE) = -.169(.050), p < .001$), high activation NA (Open $b(SE) = -.127(.046), p = .006$) and low activation NA (Open $b(SE) = -.177(.039), p < .001$) but not medium activation NA (Open $b(SE) = -.019(.035), p = .587$). Thus, states like anger and sadness—but not anxiety—impeded the daily experiences of creativity among the highly open.
Conscientiousness also uniquely moderated several within-person patterns in ways similar to openness, although the effects were weaker. Conscientious people were more creative than low conscientious people on days characterised by higher medium activation PA ($\text{Consc} \, b(\text{SE}) = .069(.034), p = .040$). They were less creative on days characterised by higher overall NA ($\text{Consc} \, b(\text{SE}) = -.108(.042), p = .010$), high activation NA ($\text{Consc} \, b(\text{SE}) = -.083(.038), p = .029$), and low activation NA ($\text{Consc} \, b(\text{SE}) = -.089(.036), p = .013$).

Neuroticism, extraversion, agreeableness, and gender moderated few of the within-person patterns. The exceptions were that people higher in neuroticism were less creative on days characterised by higher medium activation NA states like anxiety ($\text{Neur} \, b(\text{SE}) = -.064(.031), p = .039$) and people higher in extraversion were more creative on days characterised by low activation NA states like sadness ($\text{Extra} \, b(\text{SE}) = .111(.045), p = .014$). Gender did not moderate any of the within-person associations between emotions and creativity ($b(\text{SE})s$ ranged from -.056(.065) to .020(.048), $ps$ ranged from .373 to .799).

**Discussion**

Nearly all of the creativity that happens occurs in the messy real-world, not the sterile lab, and often at a smaller scale – “little c” creativity, not “Big C” creativity. Our study showed that small acts of creativity are occurring regularly in the daily lives of young adults, and that, to a large extent, the emotional correlates of “little c” can be reliably predicted. People were more likely to be creative on energetic, happy days, not gloomy days. Although we cannot say whether this same pattern would hold for “Big C” creativity, our finding calls into question the cultural idea that creativity must stem from pain and suffering (Becker, 2014) and fits nicely with the view that creative activity may be a marker of positive psychological functioning (Richards, 2007; 2009; 2010).

Our findings contribute to the growing evidence for high activation PA states in creativity. It is interesting that our daily diary patterns closely matched the meta-analysis of
laboratory evidence showing greater creativity for emotional states that are positive in valence, higher in activation, and signalling approach towards desired goals (Baas et al., 2008). In fact, the role of valence and activation in our dataset was striking. Activated PA (feeling energetic, enthusiastic, and excited) was the strongest predictor of greater daily creativity at both the between- and within-person level. Happiness and relaxation were also associated with creativity, but less strongly than excitement. In terms of effect sizes, there was a stepwise decrease in the strength of the patterns from high to low activation positive emotional states. This result replicates and extends previous real-world creativity research which measured only “happy” and “active” and not a range of activated PA states (Silvia et al., 2014).

We also found significant variability in the emotion-creativity relationship that varied by personality traits. Our larger sample size of 658 people afforded greater sensitivity to detect variation compared to previous research, which found no discernible variability in the slopes of 79 people (Silvia et al., 2014). And it was remarkable that openness moderated nearly all of these within-person patterns in the present data set. Across all emotions except medium activation NA (anxiety), there was a tighter yoking between emotion and creativity among the highly open: Open people were more creative on emotionally positive days and less creative on emotionally negative days.

These data could be interpreted in two ways given our correlational design. One interpretation is that emotions drive creativity much more strongly for open people. Perhaps open people derive greater inspiration to create when they are in positive moods and derive less inspiration when in negative moods. This pattern would be consistent with greater plasticity (rather than stability) as a higher-order trait associated with openness (DeYoung, 2006; Silvia et al., 2009). Another interpretation is that creativity drives emotions much more strongly for open people. Perhaps open people feel better when they are doing creative things,
and feel worse when they are not doing anything creative. Due to the limitations of daily diary research, we cannot say which interpretation is correct. It was also interesting that openness did not moderate the anxiety-creativity link. This may be because anxiety is commonly linked to avoidance motivation (Baas et al., 2008; Carver, 2006) and people higher in openness are not typically motivated by prevention or avoidance tendencies (Keiser & Ross, 2011).

Open people were also the most creative people. They reported a higher base-rate of creativity than any other personality trait. This finding replicated previous research showing that openness was the single strongest personality predictor of who was engaging in creative activities as measured by experience sampling (Silvia et al., 2014). Collectively, these findings reinforce openness as a key personality trait in the science of creativity (DeYoung, 2014; Kaufman, 2013; McCrae, 1987; Silvia et al., 2009) and also highlight how little is known about what open people are actually doing in their everyday lives. Future experience sampling and diary studies should dig deeper into the daily creative acts that open people are pursuing and the kinds of environments and people that encourage them.

Several other traits also mattered to everyday creativity, although to a lesser extent than openness. People higher in extraversion reported more creativity than people lower in extraversion. This may be because extraversion is associated with both greater positive affect and approach motivation (Elliot & Thrash, 2002), as well as higher activity of the neurotransmitter dopamine (DeYoung, 2010). However, extraversion was not associated with creativity in our previous experience sampling study, whereas conscientiousness was previously associated with creativity (Silvia et al., 2014). The differences in study populations could explain this effect. The sample in Silvia et al. (2014) included arts and music majors who were practicing art and music as part of their program. It makes sense that the most conscientious students would be creative more often because they are practicing
their art or music. But in a more normative sample like the present study (albeit overly sampled from psychology classes), extraversion could trump conscientiousness for creativity. We did find that conscientious moderated several of the within-person patterns, especially the sadness-creativity link: conscientious people were less creative when sad. By contrast, extraverted people were more creative when sad. It is possible that sadness stimulates conscientious people to focus on prioritized tasks other than creativity, whereas sadness might provide extraverted people the extra space for quiet reflection needed to engage in creative pursuits. Another possibility is that when extraverts are sad, they might still have enough dopaminergic-driven energy in order to be creative. We also found that neurotic people were less creative when anxious. This makes sense given that people high in neuroticism tend to be prevention-focused and highly sensitive to markers of threat (Elliot & Thrash, 2002) and that anxiety is one of the key prevention-focused emotions (Carver, 2006). Only when their anxiety is low might neurotic people feel comfortable enough to engage in creative pursuits.

There were strengths and limitations of our study. Strengths included our systematic assessment of positive and negative affect across a range of activation levels, the large sample size of 658 people that afforded greater sensitivity for detecting variability in within-person slopes, and the inclusion of personality variables to test for patterns of moderation in the emotion-creativity links. One limitation was that we measured creativity with a single self-report question that asked people to judge whether they had done anything creative that day. Although we based this item on common definitions of creativity, and used a similar item in experience sampling research (Silvia et al., 2014), this measurement choice meant that participants themselves were the arbiters of creativity. But it is interesting that even with this single self-report item, our patterns still converged with laboratory findings using standardised divergent thinking and insight tasks. Our measurement choice also meant that
we could not test different types of creativity separately—such as whether people experienced more fluency, cognitive flexibility, or originality in their daily activities. Emotions could relate to these facets of creativity differently. We regret not collecting data on specific examples of everyday creativity from our participants; however, our previous study of university students (Silvia et al., 2014) collected that information informally and found that the most common examples were songwriting; creative writing (poetry, short fiction); knitting and crochet; making new recipes; painting, drawing, and sketching; graphic and digital design; and musical performance (Silvia et al., 2014, unpublished data). Future research needs to test whether these emotion-creativity links will be similar in adult or older adult community samples or among working adults expressing creativity at higher levels in their professions (“Pro-c” creativity; Kaufman & Beghetto, 2009). We suspect that patterns will be similar for other forms of “little c” creativity regardless of age given biographical and interview data from older populations showing a link between creativity and high activation and engaged states (e.g., Collier & von Károlyi, 2014). However, we cannot say whether creativity expressed at higher levels of mastery (“Pro-c” or “Big C”) would function similarly (Kaufman & Beghetto, 2009).

Conclusion

What are creative days like? For the young adults we studied, creative days are days filled with energy and enthusiasm. They are days when people feel vigorous and engaged. Happy days and relaxed days were also creative days, but not as much as energetic days. These findings linking high activation PA to creativity reinforce findings from laboratory studies and suggest a surprising degree of convergence for a field noted for its complexity. Who has creative days? People higher in openness were more likely to have creative days, but their openness came at an emotional cost: their creativity was more strongly tied to their emotions than any other personality trait. Although our data are correlational only, they...
suggest that cultivation of certain emotions and certain traits like openness may foster greater creativity in daily life. Choosing environments, activities, and people that foster enthusiasm, motivation, and engagement and expanding ourselves into environments and situations may be the emotional keys to a creative life.
References


Table 1

Descriptive Statistics for the Aggregated Daily Measures and Personality Measures and the Between-Person Correlations with Average Creativity

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<th></th>
<th>Min</th>
<th>Max</th>
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<th>ICC</th>
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<td>.39</td>
<td>.116**</td>
<td>1.3</td>
</tr>
<tr>
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<td>.59</td>
<td>.42</td>
<td>.047</td>
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<td>.43</td>
<td>.012</td>
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<tr>
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<td>4.83</td>
<td>2.92</td>
<td>.71</td>
<td>-</td>
<td>-.060</td>
<td>0.4</td>
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<td>4.82</td>
<td>3.51</td>
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<td>-</td>
<td>.141**</td>
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<td>.265**</td>
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<td>3.73</td>
<td>.49</td>
<td>-</td>
<td>-.018</td>
<td>0.0</td>
</tr>
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</table>

Note. Min = minimum, Max = maximum, M = mean, SD = standard deviation, ICC = intraclass correlation coefficient from multilevel modeling indicates the proportion of variance attributable to between person differences (1 – ICC = proportion of variance due to within-person differences), PA = positive affect, NA = negative affect, Hi = high activation, Med = medium activation, Low = low activation. Numbers reflect the aggregated daily reports. ** p < 0.01.
### Table 2 Within-Person Emotion Predictors of Creativity that Day

<table>
<thead>
<tr>
<th>Emotion</th>
<th>$b$</th>
<th>SE</th>
<th>$p$</th>
<th>% Var</th>
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<td>.022</td>
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<td>&lt;.001</td>
<td>14.0</td>
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<td>.020</td>
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<td>.026</td>
<td>&lt;.001</td>
<td>3.1</td>
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<tr>
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<td>.023</td>
<td>&lt;.001</td>
<td>3.3</td>
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<tr>
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<td>.018</td>
<td>.663</td>
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<tr>
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<td>-.220</td>
<td>.021</td>
<td>&lt;.001</td>
<td>4.6</td>
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</table>

Note. Coefficients ($bs$) are unstandardized regression coefficients with robust standard errors (SE) from multilevel modeling that reflect the estimated average within-person relationship for the sample. Each predictor was tested separately. PA = positive affect, NA = negative affect, Hi = high activation, Med = medium activation, Low = low activation, % var = percentage of variance in daily creativity accounted for by each emotion.
Figure Caption

Figure 1. Individual differences in openness to experience moderated the within-person relationship between daily positive affect (PA) and daily creativity. The strongest relationship was found among people highest in openness (solid grey line) followed by medium levels of openness (dashed grey line) and low levels of openness (solid black line). High, medium, and low openness reflected the 25th, 50th, and 75th percentiles, respectively.
Supplemental Figure 2. A plot of the level-1 slopes from multilevel modelling showing the within-person relationships between daily positive affect (PA) and creativity for all 658 participants color-coded by openness to experience. Each line represents one participant. Green lines are participants high in openness (top 25th percentile); red lines are participants medium in openness (50th percentile); blue lines are participants low in openness (75th percentile). Participants high in openness reported greater creativity and showed stronger relationships between PA and creativity compared to participants medium and low in openness. Plots were generated with Hierarchical Linear Modeling (HLM 6.08; Raudenbush, Bryk, & Congdon, 2004).