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The Experience of Situations Before and During a COVID-19 Shelter-at-Home Period

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Abstract

Undergraduate participants described their experience of an ordinary situation before (N = 544) and during (N = 123) a COVID-19 shelter-at-home period using the Riverside Situational Q-sort (RSQ). They also rated the experience's positivity and completed a Big Five Personality Inventory. RSQ items placed higher before the sheltering period included "new relationships could develop," "femininity can be expressed," and "talking is expected." Items placed higher during the sheltering period included "family is important," and "people are disagreeing." Average positivity ratings did not differ, but relatively positive ratings before sheltering correlated with Extraversion, Agreeableness, Conscientiousness, and Openness; negative ratings correlated with Negative Emotionality. During sheltering, positive ratings again correlated with Agreeableness; negative ratings correlated with Conscientiousness. Sheltering conditions accentuated the importance of family, could lead to conflict, and limited opportunities for social interaction. Agreeableness was associated with positivity at both time periods; other traits varied in relevance as the situation changed.

The Experience of Situations Before and During a COVID-19 Shelter-at-Home Period

Life is experienced a moment at a time, within the situations that people encounter, select, and create. These situational experiences are affected by individual circumstances and by personality, but also by larger societal factors such as economic conditions (Lee et al., 2020) or, perhaps, a global pandemic. Recent research has made remarkable advances towards understanding the basic definition of a situation, the ways in which situations can be taxonomized, the relationship between situations and personality and many other topics (see Rauthmann & Sherman, 2020 for a recent review; see also Funder, 2016). However, one topic that remains nearly untouched by empirical research is whether, and to what degree, individual situational experience is affected by changes in the broader social context.

A recent, dramatic change in the broader social context is the COVID-19 pandemic, which has not only posed major threats to health, but also led to individual and government-imposed restrictions on activities such as limitations on travel, prohibitions of mass gatherings, and even “shelter-at-home” mandates. Research has already confirmed that psychological impacts include widespread loneliness, anxiety and depression (Hossain et al., 2020), and that the severity of these impacts is associated with individual differences such as calm, connection and control (Sun et al., 2020). However, to date little research has directly addressed how individuals’ experience of ordinary situations has been affected by this extraordinary event. The present study is an initial effort to help fill this gap (see also, Kuper et al., 2020).

One important advance in recent years has been the development of tools for the measurement of situational experience, such as the increasingly widely used Riverside

Situational Q-sort (RSQ). Designed to capture the experience of daily situations, the 90 items of the RSQ range widely, and include descriptors such as “New relationships could develop” and “Emotional threats are present” (Sauerberger & Funder, 2020). The present exploratory study is the first to use this tool to assess changes in situational experience associated with changes in the broader social context, by comparing experiences before and during the COVID-19 crisis. The study will also focus on two basic aspects of this experience. The first is familiarity: to what degree is the situation perceived as ordinary and mundane, as opposed to a memorable or exceptional event? The second is positivity: to what degree is the situation, overall, seen as a positive or negative experience? Positivity and negativity (or “good-bad”) are of course powerful central aspects of evaluation of almost anything, including experience (Fay, 2020).

The International Situations Project has gathered assessments of situational experience from more than 15,000 participants in 62 countries around the world (Lee et al., 2020). Participants were instructed to use the RSQ to describe their experience of any situation from the previous day that they “remember well.” The present report summarizes data from a part of this project, gathered at a California university during two different time periods – one more than two years before the COVID-19 pandemic began, and one during which the State of California was under pandemic-inspired “shelter at home” instructions. During the latter period, residents were urged to remain in their homes to the extent possible and all but essential businesses (e.g., restaurants, most stores) were closed. All participants were undergraduates at UCR and were recruited using identical methods. Notably, however, during the latter period in-person instruction was suspended, and classes were taught wholly on-line.

The physical campus was closed and students typically returned home to live with their parents or other family members.

The availability of RSQ situational assessments during these two time periods affords a unique opportunity to examine the following questions: How was the situational experience of these students affected by the COVID-19 crisis and, in particular, being forced to leave the campus environment and follow shelter-at-home instructions? And to what degree, and in what ways, were individual differences in personality associated with experiences at these two times?

Method

Participants were undergraduates at a California university and received course credit for their participation. The first wave of data collection was from March 9, 2017 to December 9, 2017 and the N was 544 (357 female). The second wave of data collection was during a statewide “shelter at home” order, and took place from April 5, 2020 to June 6, 2020, and the N was 123 (63 female). The N’s arose from recruiting as many participants as possible during the research periods. The N of the first wave (544) provides 80% power for detecting an $r = .12$; the N of the second wave (123) provides 80% power for detecting an $r = .25$.

Data were gathered through a custom-built website (ispstudy.ucr.edu) that assessed situational experience along with demographic and personality variables¹. The present report focuses on measures of situational experience and personality. Participants were asked to recall any situation “they remember well” from the previous day, and described their experience by

¹ A complete wireframe of the website and the data used in this article are available at www.situationslab.com/datasets.

completing the Riverside Situational Q-sort, a 90-item, forced-choice instrument that assesses a wide range of properties of situations. Through a drag-and-drop interface, participants placed each of the items into a 9-step, quasi-normal distribution ranging from “extremely uncharacteristic” (category 1) to “extremely characteristic” (category 9). Separately, they also rated to what degree “overall, was the situation you described a positive experience or a negative experience” on a 9-point scale ranging from “extremely negative” to “extremely positive,” and “how often do you experience situations similar to the one you just described” on a 7-point scale ranging from “never” to “quite often.”

Later in the same survey, participants completed the 60-item BFI-2, an updated, carefully-validated, and widely used measure of the Big Five personality traits and their facets (Soto & John, 2017).

Results and Discussion

Mean Differences in Situational Experience

90 separate *t*-tests compared the mean placement of each RSQ item before and during the pandemic shelter-at-home period. Because RSQ items are intercorrelated in complex ways, we used a randomization test to estimate the number of significant differences (at $p < .05$) that would be expected by chance (Sherman & Funder, 2009); this number was 4.5.² The actual number of significant differences between the two time periods was 10, and the probability of finding this many, by chance, is $p = .04$. This probability level refers to the ensemble of 10 differences, not any particular one of them.

² The analysis uses the “rand” function in the “multicon” package (Sherman, 2015) in the statistical software “R” (R Core Team, 2019).

Table 1
Comparisons of Situational Experience Before and During Covid-19 Shelter-at-home Period

| RSQ Item | Mean before | Mean during | P -value |
|--|--------------------|--------------------|-----------------|
| Rated Higher Before | | | |
| 88 New relationships could develop | 5.29 | 4.60 | .000 |
| 74 Femininity can be expressed | 4.96 | 4.50 | .007 |
| 8 Talking is expected or demanded | 5.85 | 5.37 | .008 |
| 47 Social interaction is possible | 6.63 | 6.22 | .013 |
| 61 Potential or actual romantic partners are present | 4.37 | 3.91 | .028 |
| 70 People occupy different social roles or status | 5.41 | 5.05 | .029 |
| 62 Clear rules define appropriate behavior | 5.39 | 5.05 | .030 |
| Rated Higher During | | | |
| 82 Family is important in this situation | 4.74 | 5.48 | .001 |
| 33 People are disagreeing about something | 4.64 | 5.05 | .009 |
| 62 Situation is simple and clear-cut | 6.21 | 6.56 | .041 |
| 36 Emotional threats are present | 3.87 | 4.20 | .051 |
| 51 Situation is relevant to your health | 4.25 | 4.60 | .059 |

| Additional Rating Item | Mean before | Mean during | P -value |
|--|--------------------|--------------------|-----------------|
| How often experience similar situations | 5.26 | 4.98 | .050 |
| Overall positivity of situational experience | 6.90 | 6.79 | .597 |

Notes. “Before” period was 3/9/2017 to 12/9/2017, N = 544. “During” period was 4/5/2020 to 6/6/2020, N = 123.

10 RSQ-item differences were significant at $p < .05$ (two-tailed); 4.53 would be expected by chance. The chance of finding 10 significant differences is $p = .04$.

Two relevant items with p -levels greater than .05 are displayed for illustration.

The items whose ratings significantly differed between the two periods are shown in Table 1, along with a few other items that did not quite attain $p < .05$, but are of particular relevance. All of the differences reported in this Table are in the same direction when the female and male sub-samples are considered separately. Items placed higher before the COVID-19 shelter-at-home period included “new relationships could develop,” “femininity can be expressed,” “talking is expected or demanded,” “social interaction is possible,” “potential or actual romantic partners are present,” “people occupy different social roles or status,” and “clear rules define appropriate behavior.” These differences appear to reflect the free socialization activities, with diverse individuals, that were much more possible in the campus and wider social environment before people retreated into their homes. The further question that asked participants how often they had “experienced situations similar to the one just described” (on a 7-point scale) was also rated higher before the pandemic, reflecting the relatively ordinary experiences people were having then, though at neither period were the situations reported seen as particularly exceptional (the 5-rating on the scale was labelled “occasionally”).

RSQ items placed higher during the COVID-19 shelter-at-home period included “family is important,” “people are disagreeing about something,” and “situation is simple and clear-cut.” These differences appear to reflect how being at home with one’s family is a situation with simple, well-learned expectations but also how living in close quarters with others can be a source of tension. Two other items of particular relevance did not quite attain conventional

statistical significance, but were also placed higher during the stay-at-home period; “emotional threats are present” and “situation is relevant to your health.”³

As was described earlier, after completing their RSQ description participants also rated the overall positivity of their situational experience. Perhaps surprisingly, the average rating of this item changed very little between the two periods. At both times, the average rating could be characterized as mildly positive (6.9 or 6.8 on the 9-point scale; the 7-rating was labelled “fairly positive”). While situational experiences before and during the stay-at-home period clearly differed in several ways, it seems that their overall, average positivity was relatively unaffected by this dramatic societal circumstance.

One possible explanation for this perhaps surprising finding is that participants were instructed to report on a situation they “remembered well” from the previous day. We used this instruction because in prior research (Guillaume et al., 2016) we had specified a time of day for the situations that participants were to report. On more than a few occasions, participants reported that they were asleep or simply couldn’t remember – causing their data to be uninformative. This change in procedure, however, might have made positive experiences during otherwise dull periods of isolation more memorable, and therefore more likely to be reported.⁴ A further possibility is that as the isolation period progressed, people became increasingly habituated to and less disturbed by the experience, or began to violate the sheltering protocol. A post-hoc, exploratory analysis compared the 70 participants in the

³ A complete table of all RSQ item means and standard deviations, at both time periods, is available at www.situationslab.com/datasets

⁴ However, recall that at neither point was the reported situation rated as particularly unusual, with average ratings near the point labeled as similar to others “occasionally” experienced.

“during” period who contributed data near the beginning of the period, before April 18, with the 20 participants who provided data near the end of data collection, after May 30. The positivity ratings were almost-significantly higher in the latter group (before and during means were 6.53 vs. 7.35, respectively, $t(50.64) = 1.9985$, $p = .05105$ using Welch’s unequal variances t -test).

Personality Correlates of Situational Experience

Another possible implication of the surprisingly small decline in average positivity during the sheltering period is this: Perhaps the positivity of experience is not as affected by changes in societal circumstances as one might have expected, given social psychology’s historic emphasis on the “power of the situation” (Ross & Nisbett, 1991). Despite external circumstances, overall positivity may remain to some extent a function of each individual’s personality⁵. To explore this implication, we correlated the ratings of positivity and similarity of situational experience during each time period with the measures of the Big Five traits and their facets. The results appear in Tables 2 and 3. We suggest the magnitudes of these correlations be interpreted in light of recently-suggested guidelines that an effect-size r of .10 indicates an effect that is small at the level of single events but potentially consequential in the long run, and an effect-size r of .20 indicates a medium effect that is of some explanatory and practical use even in the short run (Funder & Ozer, 2019).

Before. As Table 2 shows, before the COVID-19 pandemic, 17 of 20 correlations between the traits and their facets, and overall ratings of the positivity of each participant’s situational

⁵ We thank June Carrell for this suggestion.

Table 2
Correlations of Big Five Traits and Facets with Positivity and Similarity of Situational Experience
Before Shelter-at-home Period

| Trait | Positivity <i>r</i> | p-level | Similarity <i>r</i> | p-level |
|------------------------|------------------------|---------|------------------------|---------|
| Extraversion | .214 | <.001 | .111 | .009 |
| Sociability | .154 | <.001 | .053 | .221 |
| Assertiveness | .100 | .019 | .103 | .017 |
| Energy | .276 | <.001 | .124 | .004 |
| Agreeableness | .176 | <.001 | .030 | .480 |
| Compassion | .123 | .004 | .029 | .499 |
| Respect | .139 | .001 | .056 | .195 |
| Trust | .154 | <.001 | -.009 | .842 |
| Conscientiousness | .099 | .020 | .058 | .179 |
| Organization | .068 | .113 | .091 | .034 |
| Productive | .121 | .005 | .019 | .656 |
| Responsible | .052 | .224 | .019 | .653 |
| Negative Emotionality | -.179 | <.001 | .038 | .383 |
| Anxiety | -.136 | .001 | .084 | .050 |
| Depression | -.187 | <.001 | -.018 | .655 |
| Emotional volatility | -.137 | .001 | .036 | .406 |
| Openness to experience | .100 | .020 | .110 | .011 |
| Intellect | .134 | .002 | .124 | .004 |
| Aesthetic interest | .028 | .511 | .057 | .185 |
| Creativity | .088 | .040 | .087 | .043 |

Notes. Data gathered from 3/9/2017 to 12/9/2017; N= 544.

The chance of 17 correlations with Positivity attaining $p < .05$ is $p < .001/$

The chance of 9 correlations with Similarity attaining $p < .05$ is $p = .005$

Table 3
Correlations of Big Five Traits and Facets with Positivity and Similarity of Situational Experience
During Shelter-at-home Period

| Trait | Positivity <i>r</i> | p-level | Similarity <i>r</i> | <i>p</i> -level |
|------------------------|------------------------|---------|------------------------|-----------------|
| Extraversion | .079 | .384 | -.155 | .086 |
| Sociability | .043 | .636 | -.188 | .037 |
| Assertiveness | .173 | .055 | .035 | .703 |
| Energy | -.032 | .727 | -.189 | .037 |
| Agreeableness | .180 | .055 | .035 | .703 |
| Compassion | .273 | .002 | -.023 | .801 |
| Respect | .095 | .297 | -.173 | .055 |
| Trust | .047 | .603 | -.093 | .308 |
| Conscientiousness | -.221 | .014 | -.018 | .845 |
| Organization | -.177 | .050 | -.068 | .454 |
| Productive | -.246 | .006 | -.015 | .871 |
| Responsible | -.156 | .085 | .028 | .759 |
| Negative Emotionality | .121 | .183 | -.103 | .259 |
| Anxiety | .095 | .296 | -.138 | .128 |
| Depression | .091 | .318 | -.085 | .348 |
| Emotional volatility | .101 | .266 | -.024 | .792 |
| Openness to experience | -.012 | .897 | -.029 | .748 |
| Intellect | -.132 | .146 | -.019 | .832 |
| Aesthetic interest | -.032 | .724 | -.076 | .404 |
| Creativity | .015 | .870 | -.010 | .911 |

Notes. Data gathered from 4/5/2020 to 6/6/2020; N= 123.

The chance of 5 correlations with Positivity attaining $p < .05$ is $p = .031$

The chance of 2 correlations with Similarity attaining $p < .05$ is $p = .258$

experience, attained significance at $p < .05$. Because the 20 trait ratings are intercorrelated in complex ways, we again used a randomization test to assess the probability of attaining this many significant correlations by chance (Sherman & Funder, 2009). The probability of attaining the 17 significant correlations was $p = .0001$, an estimate that refers to the ensemble of correlations rather than any particular one of them.

People who, before the pandemic, reported relatively positive overall situational experience scored higher on the Big Five traits of Extraversion, Agreeableness, Conscientiousness, and Openness, as well as most of the facets of these traits. The highest correlation was with Extraversion, which is consistent with the view of this trait as being associated with positive emotional experience (Watson & Clark, 1997). Conversely, Negative Emotionality (also sometimes labeled “neuroticism”) was associated with more negative overall ratings of situational experience, as were all three of the facets of this trait (anxiety, depression, and emotionality). This finding is consistent with a recent report that coping well with the pandemic is associated with individual differences in calm, connection and control (Sun et al., 2020).

Less than half as many – 8 – of the 20 traits were associated with participants’ overall ratings of the similarity of their situational experience to other situations in their lives. The chance probability of this many significant correlations was $p = .005$. The only Big Five trait positively associated with the similarity rating was Openness to Experience, as well as two of its facets (intellect and creativity) along with several facets of other traits including assertiveness, energy, and organization. Anxiety, a facet of Negative Emotionality, was associated with lower ratings of similarity. We see no obvious pattern in these correlations.

During. As shown in Table 3, personality was less strongly associated with the positivity of situational experience during the sheltering period than before, but still beyond chance. The probability of attaining the 5 significant correlations was $p = .03$. During the sheltering period, relatively positive experience was associated with Agreeableness (along with its facet compassion) – as it was during the earlier period. Relatively negative experience during the sheltering period was associated with Conscientiousness (along with its facets organization and productiveness). The smaller number of significant correlations during the second wave of data collection could be because of the lower N ($N = 123$ compared to $N = 544$). The correlation with Agreeableness appears relevant to the finding, reported above, that situations included more disagreement during the sheltering period; people high in this trait are skilled at defusing conflict (Graziano & Eisenberg, 1997). People higher in Conscientiousness may have experienced more frustration during the sheltering period because of difficulties in maintaining productivity in work and studies (Hogan & Ones, 1997).

The number of significant correlations (2) of the situational similarity rating during the sheltering period did not significantly exceed chance expectations ($p = .258$).

Conclusions

This exploratory study is among the first to assess changes in individual situational experience as a function of major changes in the larger social context. Ratings of situational experience before and during the COVID-19 pandemic showed that living under shelter-in-place conditions accentuated the importance of family, could lead to conflict, and limited ordinary opportunities for social interaction. However, perhaps surprisingly, participants did not on average report that their situational experience was, when considered overall, much less

positive than before. This latter finding reflects how the overall positivity of experience was influenced by interactions between personality and the situation, rather than simply by societal circumstances. While Agreeableness was associated with positive situational experience at both time periods, other traits such as Extraversion and Conscientiousness differed in their relevance as circumstances changed.

The results of this study support the validity of the Riverside Situational Q-sort as a sensitive measure of situational experience. It clearly detected at least 10 specific ways in which a major change in societal circumstances affected the experience of daily life. Future research could and should use this instrument to extend the present findings to more diverse populations, beyond the present college sample, and other societal conditions ranging from changing economic circumstances to experiences resulting from systemic racism.

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