# The relationship between event centrality and role satisfaction among Japanese university students

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日本人大学生における出来事中心性とロールフルネスの関連
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## 要約

本研究では、出来事中心性（ある出来事が、その人のアイデンティティやライフストーリーにとって、どの程度中心的であるか）と、ロールフルネス（日常生活における持続的な役割満足感）との関係を調査した。大学生活におけるポジティブなライフイベントとネガティブなライフイベントの両方において、出来事中心性とロールフルネスの間に関連があるという仮説を立てた。さらに、この関連はポジティブなライフイベントにおいて、より高くなると予想した。大学生活で経験したポジティブなライフイベント（CES-P）とネガティブなライフイベント（CES-N）に関する出来事中心性尺度と、社会的ロールフルネス因子と内的ロールフルネス因子からなるロールフルネス尺度を用いて、208 名の日本人大学生に質問紙調査を実施した。相関分析の結果、両イベントにおける出来事中心性は、社会的ロールフルネス、内的ロールフルネスと正の相関を示した。CES-P と CES-N をそれぞれ統制した偏相関分析では、CES-N に比べ、CES-P がロールフルネスと強い相関を示した。ポジティブな出来事とネガティブな出来事を思い出し、自分のアイデンティティやライフストーリーにおけるその中心性を考慮することは、ロールフルネスの促進に寄与する可能性があり、この関係はポジティブな記憶において顕著であることが示された。

## Key words

event centrality, role satisfaction, rolefulness, university life events, university students

## 1. Introduction

### 1.1 Event centrality

Event centrality is a psychological construct defined as "how central an event is to a person's identity and life story," as measured by the Centrality of Event Scale (CES; Berntsen & Rubin, 2006). Many studies on event centrality have focused on negative memories. Previous studies have extensively examined the relationship between event centrality and negative life events. For example, Berntsen and Rubin (2007) showed that the event centrality of these negative life events was positively correlated with Posttraumatic Stress Disorder (PTSD) symptom severity, state anxiety, and trait anxiety. Boals and Ruggero (2016) also indicated that event centrality of a traumatic event was an important predictor of PTSD (see Gehrt et al. (2018) for a comprehensive review of the CES literature).

While the original version of the CES focused on stressful or traumatic events, it has also been used to examine the centrality of positive life events. For example, Zaragoza Scherman et al. (2015) conducted a cross-cultural study of the event centrality of highly positive and highly negative autobiographical memories. They showed that across cultures, positive events were more central to identity and life stories, compared to negative life events. The study also found that event centrality was related not only to PTSD and depressive symptoms but also to lower levels of life satisfaction. The event centrality of positive life events has also been found to be correlated to well-being, especially in the areas of finance and social support (Berntsen et al., 2011).

### 1.2 University life in Japan

Japan Ministry of Education, Culture, Sports, Science and Technology (2023) reported that about 2,633,000 students are attending undergraduate, 266,000 students are attending graduate school and university admission rate is 57.7 %. The mean age of entering university is 18 years old in Japan in contrast with 22 years old in OECD average (OECD, 2021). Japanese university students are economically, physically, and socially well off. According to Watanabe (2020) university students experience various positive and negative life events during university life. Janssen et al. (2014) examined the cultural life scripts of Japanese adults and found that commonly expected important

life transitional events such as *university entrance exams, major achievements*, and *finding right job* are positive events expected to occur during the university life years. They also showed that positive life events were expected to happen between 20 and 30 years of age. These results are consistent with cultural life scripts from other cultures. In addition, they focused on the quantitative features of the Japanese cultural life script events and examined their uniqueness, compared to events from other cultures. For example, *high school entrance exam* was present in the Japanese life script but absent in the Dutch life script, whereas other events, such as *leave home* were a part of the Dutch life script but not of the Japanese life script.

Watanabe (2020) investigated the types of positive meanings derived from positive (e.g., success in club activities) and negative (e.g., failure in academic exams) past experiences and explored their beneficial effects as well as their event centrality in Japanese university students. The event centrality of positive events was especially related to personal growth, attainment of new perspectives and values, and interpersonal growth.

Not only are academic accomplishments important for Japanese students, but also extra-curricular program experiences. Club and circle activities are popular extra-curricular programs among in Japanese university students; with 69.5 % Japanese university students join them (Kyoto University & Dentsu Scholarship Foundation, 2010). These extra-curricular activities include corporate internships as well as sports, cultural, scientific, and social activities.

For students, university life events are accompanied by the experiencing several social roles (e.g., establishing good relationship with others and demonstrating leadership) during this lifetime period. These university life social roles influence self-perception and personal identity. Cousins (1989) examined cultural differences on the perception of the self between Japanese and American college students. In this cross-cultural study, participants were asked to describe themselves in response to the prompt "I am…." in the Twenty Statements Test (TST; Kuhn & McPartland, 1954), and in response to a context prompt (i.e., *at home*, *at school*, and *with close friends*). The hypothesis was that Japanese students would be able to describe themselves in the context prompts statements in more abstract terms as these context prompts provided a frame to think about the self in personality terms. Results showed the increased importance of social context to the Japanese self as compared with that of their American counterparts. Although the study is based on past data, Markus and Kitayama (1991) also showed that the score of attributes in self-description was higher in contextualized format in Japanese students. As this pioneering cross-cultural study showed, the relationship among self-description, social context including social roles are important for Japanese students.

### 1.3 Social roles

Roles in social activities mediate the relationship between event centrality and psychological growth, especially in sexual violence survivors (Okada et al., 2021). This study showed that engaging in social activities was associated with high levels of sense that the survivors' role is necessary for other people and it was also related to high levels of sense of being accepted by others, relief, and self-efficacy. Thus, roles in life events and social activities are related with event centrality in survivors of a traumatic event. In particular, among university students, it is considered that the event centrality of specific events is important for the roles in interpersonal relationships. There is a positive correlation between rolefulness and interpersonal competence (Suzuki & Kato, 2019). Mahoney, Cairns, and Farmer (2003) showed that interpersonal competence is related with participation in extracurricular activities and educational aspirations during late adolescence. As these studies showed, it is considered that the experience of academic success and social roles in the extracurricular activities is important to achieve rolefulness. As mentioned before, both extracurricular activities such as club activities and academic success/failure are common experience for Japanese university students. Therefore, it would be meaningful to examine the relationship between social role and university life events.

### 1.4 Rolefulness

Rolefulness is a recently developed psychological concept (Kato & Suzuki, 2018). It is defined as the sense of continuous role satisfaction in general in our daily lives, which is independent of any specific situations, such as a job (Kato & Suzuki, 2018). Rolefulness consists of two subfactors: social rolefulness and internal rolefulness. Social rolefulness is a sense of role satisfaction based on social experiences and relationships with others. In contrast, internal rolefulness is a more internalized feeling of role satisfaction and becomes the basis of the cognition for individuality and confidence. Kato and Suzuki (2018) developed a scale to measure both subfactors of rolefulness; items such as "My role is necessary for other people" and "I have a role in the group I belong to" measure social rolefulness, whereas items such as "I realize my individuality by my role" and "I gain confidence because of my role" measure internal rolefulness.

Research has shown that rolefulness is positively correlated to self-esteem and a sense of identity (Kato & Suzuki, 2021). In addition, symptoms of depression were eased by increasing rolefulness (Kato & Suzuki, 2020). As these studies showed, rolefulness is related to emotion and positive self-cognition.

### 1.5 Hypothesis

In this study, we examined the relationship between event centrality of positive and negative university life events and rolefulness in Japanese university students. By doing so, we extend the literature of event centrality to the domain of university life and investigate whether the centrality of positive and negative university life events contribute to a sense of role fulfillment.

We hypothesized that (a) the event centrality of positive

events would be higher than that of negative events; (b) the event centrality of both positive and negative university life events would be correlated with rolefulness and in particular; and (c) that the event centrality of positive university life events would be more strongly correlated with rolefulness, compared to negative university life events.

## 2. Method

### 2.1 Participants

A total of 208 Japanese university students participated in this study. The sample was comprised of 135 females and 73 males ($M_{age}$ = 21.16 years, $SD$ = 1.07. All participants were recruited in a psychology course and completed the survey voluntarily.

### 2.2 Measures

#### 2.2.1 Centrality of Event Scale (CES)

We used a modified 7-item version of the CES (Berntsen & Rubin, 2006) to measure the centrality of positive and negative events experienced during university life. The original version of the CES measures the centrality of the most stressful or traumatic past event, but we adopted this scale to both negative and positive events (Berntsen et al., 2011; see also Zaragoza Scherman et al., 2015) and to university life by modifying the instruction. The original instruction was "*Please think back upon the most stressful or traumatic event in your life and answer the following questions in an honest and sincere way, by circling a number from 1 to 5.*" In the present study, for the event centrality of the negative event (CES-N), we instructed participants to "*Please, think back upon the most negative (stressful or traumatic) university life events and answer the following questions in an honest and sincere way, by circling a number from 1 to 5.*" For the event centrality of the positive event (CES-P), we instructed participants to "*Please, think back upon the most positive (pleasant or joyful) university life event and answer the following questions, in an honest and sincere way, by circling a number from 1 to 5.*" Participants wrote a brief description of the positive and negative events they recalled first and then answered CES-N and CES-P. For example, both CES-N and CES-P included the item of "I feel that this event has become part of my identity" and "This event has become a reference point for the way I understand myself and the world." The internal consistencies of the scale were high ($α$ = .91 for negative events and $α$ = .92 for positive events).

#### 2.2.2 Rolefulness

We used the Rolefulness Scale (Kato & Suzuki, 2018), which consists of two subscales: social rolefulness and internal rolefulness. Social rolefulness includes four items, such as "I have a role in the group I belong" and internal rolefulness consists of three items, such as "I gain confidence because of my role." Participants responded to this questionnaire using a 5-point scale ranging from 1 (disagree) to 5 (agree). We instructed participants to "*Please answer the following questions by circling a number*

*that most applies from 1 to 5.*" The internal consistencies were good (social rolefulness: $α$ = .88; internal rolefulness: $α$ = .91).

### 2.3 Data collection procedure

The investigation was carried out at university classrooms. Participants received a booklet containing all materials in the following order: Rolefulness Scale, CES-Positive (CES for the most positive university life event), and the CES-Negative (CES for the most negative university life event). The participants also answered the Scale of Life Events in Interpersonal and Achievement Domains (Takahira, 1998), but the data of the scale were not included in the present study. Before answering these questionnaires, informed consent was obtained and participants were informed that the data would be statistically processed and the anonymity would be protected. In addition, participants also provided demographic information, such as age, gender, and grade at the beginning of the survey. Participants completed the questionnaires and then submitted it to the first or third author. This study was conducted under the approval of the ethics committee in Kinjo Gakuin University, in Japan. It was also noted that participants could refuse to respond if they did not wish to do so.

### 2.4 Data coding procedure

Based on the content of the events, the first author created positive (e.g., "club activity" and "academic success") and negative (e.g., "academic failure" and "trouble with friend") event categories. Then the first author categorized the memories of the positive and negative university life events recalled and described by participants according to the established categories and then the third author categorized them again independently. Inter-coder reliability was 96.2 %. Disagreements were solved by consensus. Events that did not fit into any category were categorized as "other" (e.g., "I got first prize at dance competition" and "I have a problem with my neighbors").

## 3. Results

### 3.1 University life events described in the CES

Positive and negative university life events described when answering the CES are listed in Table 1, listed in descending order. The category of "club activity" was recalled as a positive event by 20.7 % of the participants whereas 9.6 % recalled it as negative event, too. In contrast, "academic failure" was recalled as a negative event by 11.1 % of the participants and "academic success" was recalled as a positive event by 8.2 % of the participants. Because this study was conducted with general university students, there was little recall of traumatic experiences such as disasters or accidents. Instead, everyday stressful experiences were often recalled.

### 3.2 Event centrality for positive and negative university life events

As predicted, we found that the centrality of event for positive university life events was significantly higher than that for

Table 1: Positive and negative university life events described in the CES

| Positive Events | | | | Negative Events | | | |
|---|---|---|---|---|---|---|---|
| Category | $N$ | % | CES-P | Category | $N$ | % | CES-N |
| Club activity | 43 | 20.7 | 3.44 | Academic failure | 23 | 11.1 | 2.96 |
| Friend | 37 | 17.8 | 3.09 | Assignment | 19 | 9.1 | 2.92 |
| Academic success | 17 | 8.2 | 3.27 | Trouble with friend | 20 | 9.6 | 2.99 |
| Travel | 17 | 8.2 | 2.90 | Club activity | 20 | 9.6 | 3.44 |
| School festival | 11 | 5.3 | 2.86 | Exam | 17 | 8.2 | 2.54 |
| Seminar | 8 | 3.8 | 3.27 | Part-time job | 15 | 7.2 | 2.99 |
| Part-time job | 6 | 2.9 | 2.95 | Job hunting | 14 | 6.7 | 3.84 |
| Boy/girlfriend | 5 | 2.4 | 4.34 | Lost love | 9 | 4.3 | 3.75 |
| Job hunting | 5 | 2.4 | 3.71 | Death of important person | 7 | 3.4 | 3.31 |
| Certification, license | 3 | 1.4 | 2.71 | Sickness | 5 | 2.4 | 3.26 |
| Study abroad | 3 | 1.4 | 4.38 | Trouble with family | 3 | 1.4 | 2.67 |
| Other | 53 | 25.5 | | School festival | 3 | 1.4 | 2.71 |
| | | | | Sickness of family member | 3 | 1.4 | 3.76 |
| | | | | Economic trouble | 2 | 1.0 | 3.21 |
| | | | | Other | 48 | 23.1 | |
| Total | 208 | 100 | | | 208 | 100 | |

Table 2: Means, $SD$s, and paired $t$-test for event centrality for positive and negative university life events

| | M ($SD$) | M ($SD$) | $t$ |
|---|---|---|---|
| | CES-P | CES-N | |
| Event centrality | 3.18 (1.01) | 3.03 (1.02) | 4.07 ** |

Note: ** $p < .001$.

Table 3: Correlation between event centrality and rolefulness

| | CES-P | CES-N | Social rolefulness |
|---|---|---|---|
| CES-N | .468 ** | – | – |
| Social rolefulness | .384 ** | .251 ** | – |
| Internal rolefulness | .435 ** | .278 ** | .700 ** |

Note: ** $p < .01$.

Table 4: Partial correlation between event centrality and rolefulness

| | CES-P | CES-N |
|---|---|---|
| Social rolefulness | .312 ** | .087 |
| Internal rolefulness | .395 ** | .094 |

Note: ** $p < .01$.

negative events (See Table 2). Negative events were recalled less concretely and in less detail, which may have contributed to the lower event centrality ratings.

### 3.3 Relationship between event centrality and rolefulness

As predicted, the result of the correlation analysis showed that the event centrality for both the positive event (CES-Positive; CES-P) and the negative event were positively correlated with social rolefulness and internal rolefulness (See Table 3). However, as there was a moderate positive correlation between CES-P and CES-N, we further examined the correlations described above excluding a commonality of event centrality between positive and negative events. Thus, we also calculated partial correlations controlling for CES-P or CES-N (See Table 4). The result showed that there were significant positive correlations only in CES-P and social/internal rolefulness.

As predicted, the correlation between the two factors of rolefulness and the centrality of positive events (CES-P) is stronger than that of negative events (CES-N). Additional correlation coefficient analysis was conducted to examine the hypothesis. Correlation coefficients were compared using the Fischer $z$-transformation, as described in Hittner et al. (2003). The result showed

that the correlation between social rolefulness and CES-P was significantly higher than that with CES-N ($z = 1.98$, $p = .048$). The correlation between internal rolefulness and CES-P was also significantly higher than that with CES-N ($z = 2.39$, $p = .017$).

### 4. Discussion
### 4.1 Event centrality and rolefulness

Club activities, maintaining good relationship with friends, and academic success are central positive events in university life. As mentioned before, however the number of students who belong to club activities is gradually decreasing, more than half of students participated club activities such as sports, cultural, scientific, and social activities. In addition, the decrease in academic motivation had a negative effect on mental satisfaction and relaxation towards others (Hayashi, 2022).

Buote et al. (2007) showed that the quality of new friendships is significantly related to university adjustment. This relation not only applies to a specific culture but also resonates beyond cultures (Koh et al., 2003). Satisfaction with club activities and relationship with friends increased the satisfaction of university life (Nodoya & Nishitani, 2017). Rolefulness is important to establish good relationship with friends and club members. Therefore, the satisfaction based on the friendship and interpersonal relationship in club activities may correlate with rolefulness.

Both event centrality of positive events (CES-P) and that of negative events (CES-N) were correlated with rolefulness positively, but partial correlation between CES-N and rolefulness was not significant. There is a positive correlation between CES-P and CES-N and this correlation may cause the spurious correlation between CES-N and rolefulness. According to Matsumoto (2022), traumatic events deeply influence an individual's identity, leading to reconsidering one's life, others, and their environment. Focusing on negative life events such as traumatic events and noticing its meaning for life might facilitate our role identity. However, negative events described in the present study such as academic failure and trouble with friends were not life threatening. Such daily hassles may not have a strong impact to change our individual's role identity, compared to life threating traumatic events. This is the potential reason why we did not find a partial correlation between CES-N and rolefulness. In daily life, it is the negative events that receive much of our attention, and this is because negative events can have a great influence on our lives.

With regard to the correlation between event centrality of positive events (CES-P) and that of negative events (CES-N), some university life events described by students in the present study included both positive and negative meaning. For instance, club activity and academic success/failure were described as both as a positive and a negative event. As the categorization showed, club activity was most recalled among positive event and 9.6 % of participants recalled it as negative event. In addition, academic failure was most recalled among negative event and 29.4 % of them recalled academic success as positive event. These results are consistent with research by Toyama and Sakurai (1999) who surveyed Japanese university students and found that the experiences in club activities are sometimes positive and sometimes negative for students. Similarly, Ikeda and Nihei (2009) examined the effects of retelling negative events as positive autobiographical memories and the result showed that the retelling process significantly increased positive emotional words and decreased negative emotional words. In our study, some university life events included both positive and negative aspects, thereby we found a positive correlation between the event centrality of memories of the positive and negative university life events.

### 4.2  Social and internal rolefulness

There was a significant positive correlation between social and internal rolefulness. As previous evidence showed (Kato &

Suzuki, 2020; 2021), social rolefulness is developed based on our social experience and interpersonal relationships first. Subsequently, it is internalized and therefore, internal rolefulness is the result of the internalization of social rolefulness. Suzuki and Kato (2023) examined the developmental process of rolefulness by longitudinal study using the data of Japanese high school students and showed that previous social rolefulness increased internal rolefulness through the high school period. As this finding showed, these internalizing processes take place mainly during late adolescence. The participants of the present study were university students and almost all of them young adults. Many of them might have achieved the internalizing of social rolefulness, represented by internal rolefulness being correlated with social rolefulness.

### 4.3  Future research

The present study could be extended to cross-cultural as well as generational and longitudinal studies as the relationship between event centrality for both negative and positive life events and rolefulness might be different across cultures, age groups, and through time. These future studies can potentially further our understanding about identity and rolefulness. Berntsen et al. (2011) mentioned that CES-P, to a greater extent than CES-N, reflects a cultural default for structuring life story and identity. Janssen et al. (2014) showed that some Japanese cultural life script events are unique to Japanese culture. Cultural differences in rolefulness might also exist and therefore, future research should compare rolefulness across cultures. In addition, the result of the present study was based on the cross-sectional data and reported only correlation between CES and rolefulness. Investigating their reciprocal relationships using a longitudinal design may provide further insight into the formation of identity.

### 5.  Conclusion

This study investigated the relationship between the event centrality of positive and negative university life events and social and internal rolefulness in Japanese students. Results showed that the event centrality of the positive events (CES-P) was significantly higher than that of negative events (CES-N). This means that the participants rated their positive university life events to be, on average, more central for their identity, consistent with previous studies (Berntsen et al., 2011; Zaragoza Scherman et al., 2015). Moreover, both factors of rolefulness (social and internal) were positively correlated with event centrality of positive (CES-P) and negative (CES-N) university life events. CES-P was still correlated with both factors rolefulness even when controlling for CES-N, but when controlling for CES-P, CES-N was no longer correlated with any of the factors of rolefulness.

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