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CURIOSITY MADE THE SERVICE EMPLOYEE MORE  
CREATIVE: THE PROCESS

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**Abstract:**

This study proposes a mediation model by drawing on the self-determination theory (SDT), organismic intergraton theory, the control theory, organizational learning theory and the creativity literature, we develop a mediation model in order to examine how two curiosity factors (deprivation sensitivity and joyous exploration) affects creativity via knowledge sharing at work. The paper adopts a new lens for understanding creativity. A conceptual framework identifying the roles of two curiosity factors (deprivation sensitivity and joyous exploration) and knowledge sharing. Employees from service sectors in China were surveyed using a self-administered instrument for data collection. The results indicate a mediation model in which (1) deprivation sensitivity favors creativity; joyous exploration favors creativity; (2) deprivation sensitivity favors knowledge sharing; joyous exploration favors knowledge sharing; (3) knowledge sharing mediate the positive relationship between two curiosity factors and creativity. This study examines the relationship between two curiosity factors and creativity.

**Keywords:**

Deprivation Sensitivity, Joyous Exploration, Knowledge Sharing

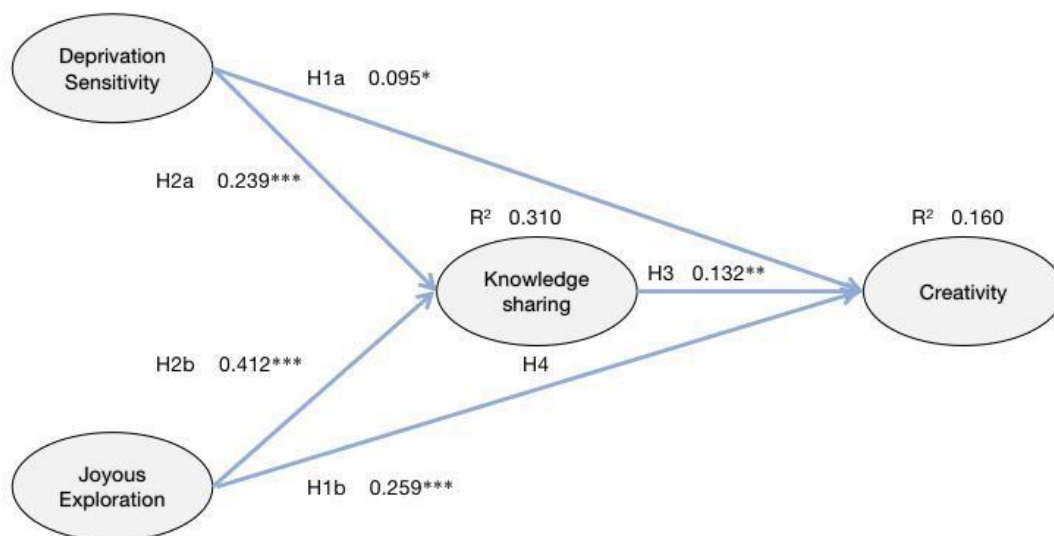
**Introduction**

Innovation has long been understood as a critical driver of economic growth and competitive success of company (Sawhney et al. 2006). The existing managerial experience and empirical research suggest that innovation calls for the implementation of creative ideas (Amabile, 1998). The current study investigates service creativity as a dependent variable in the context of frontline employees' service work. Existing studies have found that employees with certain

Personality traits is posited as a crucial concerns of employee creativity (e.g., Anderson & Gasteiger, 2008). Curiosity is a personality trait underlying behavioral tendencies related to knowledge acquisition, learning, and thinking (Mussel, Spengler, Litmanet al., 2011). Although previous studies have investigated the impact of various personality traits on creativity, missing from research attention has been the relationship between trait curiosity and creativity, especially in the service context. To fill the gap in literature, the current study is to examine the relationship between curiosity and creativity. Moreover, the findings from this study offer theoretical contributions which provide the better understanding on the process of knowledge sharing from curiosity factors to creativity.

### Literature Review and Hypotheses Development

In this section, we trace the development of our overall research model by exploring the general nature of two curiosity factors (deprivation sensitivity and joyous exploration) as they relate to creativity. We next investigate how these two factors influences knowledge sharing. We then examine the influence of knowledge sharing on creativity. Curiosity appears to be a fundamental motive in producing employee creative ideas and industry innovation (Gino, 2018). New research shows that curiosity is vital to an organization's performance (eg., Mussel, Patrick, et al, 2011; Mussel, Spengler, Litman, et al, 2011) and it can be considered interlinked with creativity (Hunter, Abraham, Hunter, Goldberg, & Eastwood, 2016). The hypothesized model is depicted in Figure 1.



**Figure 1: A Mediation Model Linking Curiosity to Service Creativity Through Knowledge Sharing.**

Knowledge sharing refers to individuals asking for advice from each other in order to obtain intellectual capital, and it is a motivation of individuals to pass on their own intellectual capital to others. (Van den Hooff and De Ridder, 2004). Deprivation sensitivity is an aversive, avoidance motivation (Kashdan, et al., 2018). According to self-determination theory (SDT), introjected regulation evoke an employee's deprivation feeling, to achieve the rewarding experience of cognitive coherence, deprivation sensitivity-oriented employees have a natural tendency and emotional-motivational state to engage more in knowledge sharing activities.

The person with deprivation sensitivity results from the intention to reduce the anxiety and uncertainty of knowledge gap and to pursue the pleasurable feeling of clarifying complexity and ambiguity of knowledge gap (Berlyne, 1978; Litman, 2010; Mussel, 2013). Joyous exploration — being consumed with wonder about the fascinating features of the world, it is an appetitive, approach motivation (Kashdan, et al, 2018). According to self determination theory (SDT), when individuals feel the autonomy to freely choose goals based on their own interests, curiosity, concerns, or enduring values, they feel empowered and motivated. Internal/independent motivators include enjoyment (Wang and Hou, 2015). We posit that employees with joyous exploration is the equal of the motivation for doing an activity such as knowledge collecting and knowledge donating for the feelings associated with exploring new ideas and developing knowledge (Vallerand, 1997; Csikszentmihalyi, 1975; Harackiewicz, 1979). We argue that the two curiosity factors may exert significant impact on employees' knowledge sharing behaviors.

H1: Deprivation sensitivity (a) and joyous exploration (b) have a positive effect on creativity.

H2: Deprivation sensitivity (a) and joyous exploration (b) have a positive effect on knowledge sharing.

Knowledge sharing is showed as an important predictor of creative outcomes because it is strongly related to creative performance (Ohly et al., 2006). We argue that, in addition to a direct influence on service creativity, a highly plausible mediators of the relationship between curiosity factors and creativity of employees is their active knowledge sharing with organizational members. Some recent studies have recognized the importance of knowledge management and knowledge sharing in supporting and fostering innovation, innovativeness, service creativity, service quality, new service development, organizational learning and organizational effectiveness in the service context (e.g., Kim & Lee, 2012; Kim & Lee, 2012; Yang, 2010; Hu et al., 2009). Specifically, an employee proficient in gathering knowledge and contributing knowledge to colleagues is likely to generate new ideas, thus facilitating and sustaining high levels of his or her creative work involvement.

We suggest that individuals with a strong curiosity trait participate more actively in knowledge-sharing behaviors, which help maintain learning cycles, exploratory behaviors, and personal development. The relationship between two curiosity factors and the service creativity of employees is assumed to be mediated by active knowledge sharing behavior and creative work involvement among organizational members:

H3: Knowledge sharing has a positive effect on creativity.

H4: Knowledge sharing mediates the relationship between curiosity and creativity.

### **Research Methodology**

We conducted to evaluate the measurement model and structural model in PLS-SEM (SmartPLS 3.2) in order to check the reliability and validity of the measure and test hypothesis among constructs. This study collected data from the frontline service employees in China via WeChat. Within a month, 1729 recruited frontline service employees took part in the questionnaire survey. After deleting incomplete questionnaires, a total of 822 matched questionnaires provided useable data for this study (the valid response rate was 47.54%= 822/1729). Table 1 reports the profile of the frontline service employees that provided valid

responses. Table 2 provides a list of measures used in this study. This study used different response formats (Likert scales) for the measurement of variables.

**Table 1: Profile of The Responding Employees (N=822)**

Demographics	Frequency	Percentage
<b>Age (years)</b>		
<19	11	1%
20-24	105	13%
25-29	261	32%
30-34	276	33%
35-39	81	10%
40-44	34	4%
45-49	24	3%
50-54	29	4%
55-59	2	0
>60	1	0
<b>Gender</b>		
Male	362	44%
Female	462	56%
<b>Education level</b>		
High School	49	6%
Associate Degree	132	16%
Bachelor Degree	487	59%
Master or Above	156	19%
<b>Job tenure (years)</b>		
1-5	157	19%
6-10	464	56%
11-15	36	4%
16-20	70	8%
21-25	28	5%
>26	69	8%
<b>Service Sectors</b>		
Educational service sector	177	21%
Financial service sector	148	18%

Health care and social service sector	102	12%
Entertainment, culture, arts and sports service sector	96	12%
Internet service sector	73	9%
Living service sector	57	7%
Agency service sector	56	7%
Automobile service sector	38	5%
Communication service sectors	22	3%
Restaurant service sector	23	3%
Tourism service sector	19	2%
Other service sectors	13	2%

**Table 2: Construct Measures and Results of The Measurement Analysis.**

Constructs and measurement items	SFL	AVE	CR	VIF
<b>Creativity (Cronbach's <math>\alpha=0.940</math>)</b>				
1. I suggest new ways to increase service quality.	0.84	0.71	0.95	2.9
2. I am a good source of creative ideas.	0.89			4.0
3. I promote and champion ideas to others.	0.78			2.2
4. I exhibit creativity on the job when given the opportunity to do so.	0.83			2.6
5. I develop adequate plans and schedules for the implementation of new ideas.	0.75			2.0
6. I often have new and innovative ideas.	0.89			4.0
7. I come up with creative solutions to problems.	0.87			3.7
ServC8: I suggest new ways of performing work tasks.	0.87			3.5
<b>Knowledge Sharing (Cronbach's <math>\alpha= 0.780</math>)</b>				
1. When I need certain knowledge, I ask my colleagues about it.	0.72	0.55	0.90	1.9
2. I ask my colleagues about their abilities when I need to learn something.	0.72			1.9
3. When one of my colleagues is good at something, I ask him/her to teach me how to do it.	0.75			1.8
4. When I have learned something new, I tell my colleagues about it.	0.81			2.1
5. I share information I have with my colleagues.	0.80			2.1

6. I think it is important that my colleagues know what I am doing.	0.71			2.4
7. I regularly tell my colleagues what I am doing.	0.70			2.3
Joyous Exploration (Cronbach's $\alpha= 0.861$ )				
1. I view challenging situations as an opportunity to grow and learn.	0.83	0.71	0.91	1.94
2. I am always looking for experiences that challenge how I think about myself and the world.	0.87			2.4
3. I seek out situations where it is likely that I will have to think in depth about something.	0.85			2.3
4. I find it fascinating to learn new information.	0.81			1.7
Deprivation Sensitivity (Cronbach's $\alpha= 0.813$ )				
1. I can spend hours on a single problem because I just can't rest without knowing the answer.	0.85	0.73	0.89	1.95
2. I feel frustrated if I can't figure out the solution to a problem, so I work even harder to solve it.	0.88			2.2
3. I work relentlessly at problems that I feel must be solved.	0.84			1.58
<i>Notes:</i> <i>N=822. The items of construct Creativity,, Deprivation Sensitivity, Joyous Exploration are measured using a five-point Likert-type scale (from 1 = strongly disagree to 5 = strongly agree);The items of construct Knowledge Sharing is measured using a seven-point Likert-type scale (from 1 = strongly disagree to 7 = strongly agree);M = Mean,SD = Standard Deviation; VIF= Collinearity statistics; N=822; SFL = standardized factor loading; AVE = average variance extracted; CR = composite reliability; All factor loadings are significant at <math>p &lt; .0001</math>.</i>				

Follow the advice of methodology scholars (MacKenzie & Podsakoff, 2012; Kock et al, 2015), we adopted the techniques of procedural remedies and statistical remedies to minimize the potential threat of CMB. Table 2 reports the collinearity statistics (VIFs) associated with the underlying variables in our measurement model. All VIFs were lower than the threshold of 0.4, indicating that CMB could be considered nonexistence in this study.

Then, we examined the fit of the measurement model (in SmartPLS 3.2). We assessed the convergent validity of each construct with standardized factor loadings ( $\lambda$ ) and average variance extracted (AVE) values (Anderson and Gerbing, 1988; Hair et al., 2010; Fornell and Larcker, 1981; Bagozzi and Yi, 1991; Anderson and Gerbing, 1988). As Table 2 shows, the indicators of the respective constructs were loaded onto their intended constructs and the  $\lambda$  values for the indicators ranged from 0.70 to 0.89. The AVE values for the constructs ranged from 0.55 to 0.73, all of which exceed the threshold of 0.50. The CR values for the constructs ranged from 0.89 to 0.95 and all exceeded the desirable level of 0.60. These results indicate that each construct has appropriate reliability and convergent validity.

Structural models look at the regression weights of independent variables (i.e., deprivation sensitivity and joyous exploration) on dependent variable (i.e., service creativity). For creativity is positively affected by: deprivation sensitivity ( $\beta=0.095$ ,  $P<0.05$  and the hypothesis H1a is supported), joyous exploration ( $\beta=0.259$ ,  $P<0.001$  and hypothesis H1b is supported), knowledge sharing ( $\beta =0.132$ ,  $P<0.01$  and hypothesis H3 is supported). For knowledge sharing is positively affected by: deprivation sensitivity ( $\beta =0.239$ ,  $P<0.001$  and the hypothesis H2a is supported), joyous exploration ( $\beta =0.412$ ,  $P<0.001$  and hypothesis H2b is supported). For knowledge sharing mediated the relationship between curiosity and creativity: the total effects of deprivation sensitivity-creativity ( $\beta=0.126$ ,  $P<0.001$ ), the total effects of joyous exploration-creativity ( $\beta =0.314$ ,  $P<0.001$ ), the total indirect effects of deprivation sensitivity-creativity ( $\beta=0.031$ ,  $P<0.01$ ), the total indirect effects of joyous exploration-creativity ( $\beta =0.054$ ,  $P<0.01$ ), hypothesis H4 is supported. The three constructs explain 16% of variance in creativity ( $R \text{ square}=0.160$ ) (Figure 1).

### Result and Discussion

The purpose of this study was to increase our understanding of how employee curiosity relates to the extent to which they engage in creativity. In this study, we offer a new lens on creativity literature by emphasizing the relevance of process. The main contribution of this study is to establish a link between employee curiosity factors and creativity, including the important mediating variable.

This study integrates multiple theoretical bases and provides empirical evidence for the mediation model to express the mechanism process between employee curiosity and service creativity. These findings have important theoretical implications. Employees' curiosity needs knowledge sharing to improve the creativity of service. Curiosity and knowledge sharing together are the main drivers of creativity. Employees who actively absorb new external knowledge can better promote knowledge sharing and integration. These implications also highlight the contribution of this study. Our results contribute to the creativity theory by lifting the veil between curiosity and creativity. This study adds to the accuracy of the theory of how employee curiosity affects service creativity, as our findings identify the underlying mechanisms that together explain how curiosity affects service.

### Limitation and Further Research

This study still has some research limitations, which can provide some opportunities for future research. Firstly, the design of this study is cross-sectional in nature, future research is suggested to use longitudinal or experimental designs in this study. Secondly, because the same employees provided the measures of the predictor and outcomes variables, it would be considered the possibility of common method bias.

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