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The antecedents and consequences of employees' followership behavior in social network organizational context: a longitudinal study

Sheng Xu¹, Tonghua Yang¹, Ruliang Guo^{1*} and Wenyuan Zhang^{2*} 

Abstract

The social network is a social structure made up of individuals who are tied by social links. With the rapid development of information technology, online social networking services and microblogging service received a lot of attention. Social networks provide a comprehensive communication platform of interaction, knowledge sharing, information dissemination to people, etc. They also bring a significant impact on people's working style and interpersonal communication. Drawing from trait theory, regulatory focus theory, followership theory, political skills, self-construal theory, and performance theory, this study systematically investigates the antecedents that induce the difference in followership behavior and the different consequences of behavior on job performance. We introduce a novel hybrid similarity measure, and the best matching based supervised learning process is conducted for training the time series. The events before the current timestamp can be adopted as a training set, and an early predictor will be generated by learning the rules from the training set. The newly coming events will be used for verifying the predictor, or assessing and tuning it. This paper clarifies the antecedents' mechanism for differences in followership behavior and the consequence mechanism that followership behavior differently impacts job performance.

Keywords: Social network, Personality preference, Regulatory focus theory, Political skills, Job performance

1 Introduction

With the rapid development of information technology [1], online social networking services and microblogging service received a lot of attention. Social networks [2, 3] provide people a comprehensive communication platform of interaction, knowledge sharing, information dissemination, and so on. They also bring a significant impact on people's working style and interpersonal communication. Therefore, with the diversified development of information technology, we think that the research and application of social network have important theoretical and practical value. Different from traditional information networks, social networks have their unique

characteristics. For example, individuals and groups in a social network reflect strong social characteristics in behavior and show strong interdependence with the other nodes and network context. Diverse online social network applications bring various network attributes, and the description of individuals or groups is multi-dimensional. The individuals and the network topology structure interact continuously, and the content and structure are correlated. The individuals publish new content on the network and form new connections, and social networks are evolving over time.

Followership concerned researchers due to great changes in the organizational environment and structure after the transformation of the traditional industrial economy into knowledge and information-based market economy. Followership behavior is the starting point of researching followership theory which is a hot topic at the contemporary management. Western researchers

* Correspondence: 13607083913@163.com; 18749320887@163.com

¹Vocational Normal College, Jiangxi Agricultural University, Nanchang 330045, China

²College of Intelligence and Computing, Tianjin University, Tianjin 300350, China

have been focusing on two aspects. One is to explore its contribution to organizational development; the other is to explore the mechanism by which employees' followership behavior affects leadership. Domestically, the research on behavior began in the early twenty-first century. Although the start is relatively late, the research development is very fast. Followership behavior is defined as a multi-dimensional behavior in which followers interact with leadership and organizational context by certain motivation-oriented approach. It is through that that followers help leaders take responsibility for their work, deal with work issues and communicate effectively with leaders. It includes information feedback behaviors that support leadership decisions, voice behaviors, challenge behaviors, and creative behaviors that implement leadership decisions, and organizational citizenship behaviors [4].

Although extant literature has mainly explored the positive followership paradigm, there is limited literature that has systematically examined the antecedents that elicit employees to choose different followership behaviors and different consequences of behavior on job performance. However, antecedent and consequence are a complete system of constructing followership theory. One-sided research not only makes followership theory difficult relevant to organizational settings but also results in its abnormal research. To this end, this study inquires the antecedents and consequences of employees' followership behavior in China.

There are two theoretical perspectives in existing literature, which are personality perspective and organizational situation perspective. We explore antecedents that trigger different followership behaviors among employees [5]. Given that the personality tendency is an important internal factor that arouses individual differences in behavior, which in turn affects job performance [6]. Thus, this study only applies personality as a theoretical perspective. In the present research, we first investigate the

antecedents that induce followership behavior to differentiate into promotion and prevention. Drawing upon trait theory, regulatory focus theory, political skills, and followership theory, we construct an antecedent mechanism. In the mechanism, proactive and traditional personality tendencies are antecedents that induce behavior to differentiate into promotion and prevention, in which motivation-behavioral regulatory focus is a mediator variable and political skills are moderator variables. We assume that the effect of personality on behavior is mediated by regulatory focus and the relationship between personality and regulatory focus moderated by political skills.

Second, drawing on followership theory, self-construal theory, and job performance, we conduct a study of the differential effects of promotion and prevention behavior on job performance, namely, establishing a consequence mechanism. More specifically, we examine the moderating effect of independent self-construal in the relationship between promotion behavior and task, situational performance, and moderating effect of interdependent self-construal in the relationship between prevention behavior and task, situational performance (Fig. 1).

2 Related work

2.1 Social network

The social network [7] originally came from the famous British anthropologists Brown Radcliffe. Brown defined the social network as a special social relationship, which is a unique relationship among a group of special individuals. The social network is a social structure made up of individuals who are tied by social links. Social network theory is about people and organizations of relatively stable social relations theory, the individual node, and complex or simple communication of social relationship network, focus on individuals, groups, organizations, and

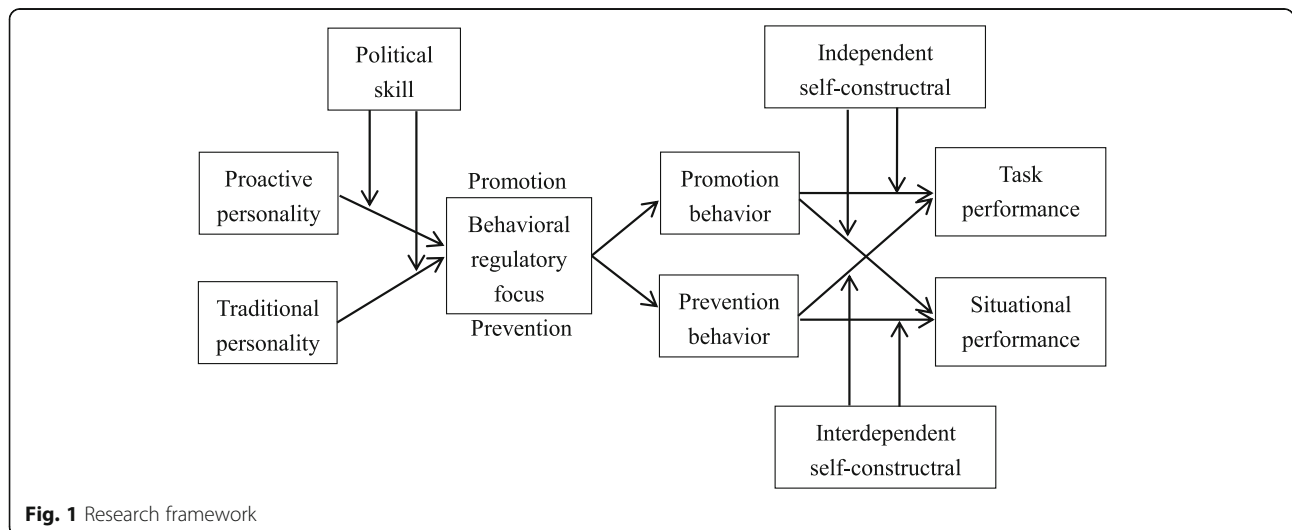


Fig. 1 Research framework

systems of relation model [8]. Social network theory is derived from the study of interpersonal relationships and to build a harmonious interpersonal relationship. From the 1930s to the 1970s, many anthropologists and sociologists began thinking about social life in the network structure (fabric web) and, as different fields continues to deepen, construct the theoretical framework of the social network.

2.2 Personality and promotion and prevention behavior

Personality refers to the unique characteristic, temperament, and tendency of individuals formed by their congenital potential, cultural influence, and environment chastening. Generally, researchers divide personality into five personalities and a proactive, traditional personality. The former tends to individual's congenital potential, while the latter acquired behavioral tendency. We use the latter to measure personality. Proactive personality, which is the individual characteristic that affects active behavior, refers to the individual's consciousness of not being restricted by the situation, constantly exploring a new path, capturing favorable opportunities, and actively changing the environment. Zheng [9] stated that individuals with proactive personalities are less constrained by environment and dilemmas. Instead, they actively adapt and change. They can effectively identify and seize favorable opportunities and take many proactive actions to challenge difficulties until meaningful changes happen. Meanwhile, they are also forerunners who perform missions, discover and solve problems, and influence others. Zhou and Long [10] indicated that individuals with proactive personalities have more intrinsic qualities, such as competency, coordination ability, responsibility, persistent enterprising spirit, and integrity, which can provide inexhaustible internal quality and motivation for their promotion behaviors (i.e., pioneering and enterprising, following positive expectations). Traditional personality refers to the individual's cognitive attitude and ideology; value orientation, temperament, and behavioral tendency are shaped by traditional culture. The individuals with traditional personality are inveterately influenced by traditional culture; they tend to do role normative behavior rather than autonomous so that the duties and obligations under the role norm become the core of their participation in organizational activities [11].

3 Problem definition and analysis

3.1 Personality tendency exerts on followership behavior

Based on the human instinct of approaching pleasure and avoiding pain in regulatory focus theory, Luo [12] divides polymorphic followership behavior into promotion and prevention behavior, which are two sets of the basic behavioral regulation system. Promotion behavior is described as initiative behavior such as change, innovation, and pioneering shown by followers in order to follow a positive expectation goal, which is guided by promotion focus with approaching pleasure. It entails five-dimensional second-

order factors: self-realization needs (motivation), dependence on leaders (guanxi), active promotion spirit (attitude), dynamic response to situations (capability), and pursuit of positive expectations (orientation). Prevention behavior is manifested as passive conservative behavior such as cautiousness and security that followers express in order to avoid negative outcomes under the guidance of prevention focus with avoiding pain. It contains self-protection needs (motivation), fear of leadership authoritarianism (guanxi), passive prevention (attitude), negative adaptation to the environment (capability), and circumvention of negative outcomes (orientation).

Research on the relationship between personality and behavior is as follows. For proactive personality, a great deal of evidence showed that (1) individual's innovation behavior is closely related to proactive personality; (2) individuals with proactive personality are more concerned about the success or failure of the organization, and they rarely remain silent to the problems that arise in the organization but rather solve problems for leaders, actively feedback information, and provide advice [13]; (3) proactive personality helps followers to enhance their self-efficacy, and thus promote their performance in more promotion behaviors [14]. For traditional personality, the following have been documented: (1) In order to maintain a harmonious relationship with leaders, individuals with high adherence to authority sometimes blindly follow leaders' unethical instructions [15]; (2) individuals who remain in their proper sphere lack innovative thinking and courage to take responsibility. When faced with dynamic task situations, they still rigidly adhere to established procedural norms in order to avoid uncertain risks [16]; (3) those who have self-protection tendency do not suffer from harm for their own safety and interests. Hence, they lack critical thinking, often keep silent about organizational matters, and are careful and passive obedience [17]. Combined, those who have the traditional personality of compliance with authority, keeping on the rails and self-protection, perform prevention behaviors that are cautious, maintaining rule, and conservative and submissive. Thus, we hypothesize:

3.1.1 Problem 1

Proactive personality tendency exerts a positive effect on promotion behavior; traditional personality tendency exerts a positive effect on prevention behavior.

3.2 The mediating role of behavioral regulation focus

The regulatory focus theory was proposed by Higgins (1997) on the basis of self-discrepancy theory, which constructs two types of self-regulation systems from the perspective of human instincts of approaching pleasure and avoiding pain. One is a promotion focus of approaching pleasure, which positively regulates reward-

acquisition behavior and enables individuals to focus on positive expectations. Individuals with promotion focus pursue the “ideal self” and care for achievements and rewards; the other is a prevention focus of avoiding pain, which positively regulates punishment-avoidance behavior and makes individuals focus on negative expectations. Individuals with prevention focus aspire to the “obligatory self” and care for responsibility and obligation [18]. The regulatory focus theory emphasizes that individuals with different regulatory focus have different expectations and experiences. Specifically, individuals with promotion focus are more concerned about desired end-states. They take whether or not they can achieve success and reward seriously, and often approach goals by using promotion strategies, while those who with prevention think highly of failure and punishment and often adopt prevention strategies to approach goals [19]. It also emphasizes that the individual’s promotion and prevention focus are shaped by the interaction of trait regulatory focus and situational regulatory focus. Trait regulatory focus, which is stable, is shaped in the growth process of individuals, whereas situational regulatory focus, which is temporary and limits how individuals regulate their own traits, is induced by external factors and information clues of task framework. The two focuses are relative, which transform each other dynamically as situation changes [20].

Behavioral psychology asserts that human behavior is guided, governed, and maintained by the motivation that is individual’s internal demand generated by the interaction between psychological and environmental factors [21]. Trait activation theory indicates that individual traits are hidden in a living organism. Only when they are initiated by information cues in the external environment and obtain a perception assessment that fits self-need and environment, will they express in behavior [22]. In other words, a distinct purpose in a certain situation is the dominance and motivation of human behavior rather than personality trait. More specifically, after proactive and traditional personality are initiated and activated by informational cues in relevant contexts, the first is to urge behavioral motivation (regulatory focus) so that people have a clear goal and strategy of pursuing goals and then can affect the explicit operational behavior. Relevant empirical research demonstrates that (1) proactive individuals are not willing to be restricted by environment, so they actively explore new paths and capture favorable opportunities, and take creative behaviors to change, which leads individuals to tend to positive expectation and stimulates their promotion focus, and then generates more promotion behaviors; (2) traditional individuals have a tendency to fear authority, keeping on the rails and self-protection, which induces individuals to pay attention to whether they will fail and be punished, and stimulates prevention focus, and then

generates more prevention behavior [23, 24]. Therefore, regulatory focus plays an indispensable role in the relationship between individuals’ personality tendency and their followership behavior. Based on the above discussion, we hypothesize:

3.2.1 Problem 2

The regulatory focus plays a mediating role in the relationship between personality and followership behavior, in which proactive tendency leads to promotion behavior by influencing an individual’s promotion focus; traditional tendency leads to prevention behavior by influencing prevention focus.

3.3 The moderating role of political skills

Political skills are individual ability that combines interpersonal interaction style and social efficacy, including four specific abilities: networking ability, interpersonal influence, social astuteness, and apparent sincerity. Followers with different political skills have different perception experiences and attribution assessments for dynamic and complex organizational situations in which favorable and unfavorable factors always coexist and, in turn, affect their differences in motivation-behavior regulatory focus. Friedman and Forster [25] have shown that higher network capability facilitates followers to build a broad human network. Specifically, in a favorable situation, the human network can not only provide numerous interpersonal supports for proactive individuals to pursue positive expectations, but also develop high exchange relations with leaders, and also can obtain more work-related information, resources, and authorization from leaders. At the same time, it can also create a good interpersonal environment for traditional individuals to better fulfill their role duty. In an unfavorable situation, a wide human network can broaden the channels of information communication within the organization and promote the construction alliance that helps and cooperates with each other, which enables proactive and traditional individuals’ resources to integrate and complement. Guan [26] has found that proactive and traditional individuals with interpersonal influence are good at connecting their own interests with interests of relevant stakeholders so that their opinions on work can be timely supported by leaders and co-workers. In addition, in unfavorable situation, in order to achieve expected work goals, followers with high interpersonal influence will flexibly adjust their roles and behavioral strategies as situation changes and use interpersonal influence skills to influence others in the process of understanding others, which is conducive to seeking common ground while reserving differences, uniting manpower, and forming a joint force to cope with difficulties. Kark and Van-Dijk [27] have stated that in a stable organization, proactive individuals with high social astuteness are good at grasping favorable conditions and boldly

innovate to pursue outstanding performance and free development. At the same time, high social astuteness will weaken or dissolve the ideological bondage of role obligation to traditional individual to promote them to greatly choose and perform positive behavior. In a turbulent organization, high social astuteness, for proactive individual, can support that they are keen to discover and timely seize the fleeting opportunities to get out of trouble, and actively change environment and influence surrounding industry through the path which makes the best use of the advantages and bypasses the disadvantages. For traditional individual, high social astuteness can help them anticipate possible risks in their work and set up circumvention plans in advance to prevent work losses and increase performance. Li et al. [28] have proved that apparent sincerity can enhance followers' interpersonal affinity, give them a good impression that others deserve to depend on, and easily gain trust and support from the organization. At the same time, in power- and "guanxi"-oriented China, it helps individuals to release psychological pressure generated by the rule of man, to understand suspicion and alertness between those who lack trust with each other, and to promote mutual understanding and respect.

On the contrary, Li et al. [29] also have indicated that proactive and traditional individuals, with lack of networkability, cannot build human network that contributes to self-development; with insufficient interpersonal influence, they cannot affect the working environment and stakeholders; with less than in social astuteness, they are difficult to seize favorable opportunities and to turn disadvantage into an advantage; without apparent sincerity, they are difficult to obtain trust and support from leaders and colleagues.

In summary, high political skills guide followers to implement positive attribution assessment to work situation and effectively play the advantage of traits, which can drive followers to tend to promotion focus; however, low political skills guide followers to make negative attribution assessment to work situation and restrict trait advantages, which can drive prevention focus. Based on the above discussion, we hypothesize:

3.3.1 Problem 3

Political skills play a moderating role in the relationship between personality traits and motivation-behavioral regulatory focus. High or low political skills strengthen or weaken the relationship between proactive personality and promotion focus, respectively; low or high political skills strengthen or weaken the relationship between traditional personality and prevention focus, respectively.

3.4 Promotion, prevention behavior, and job performance

According to performance theory, job performance entails task and situational performance. Task performance refers

to the quality and efficiency of an individual completing the task in his or her position, or in a team; situational performance is that contributes to overall organizational operation and has a constructive impact on the environment that promotes the effective completion of task performance [30]. Individuals' flexible implementation of promotion and prevention behavior is important for effectively responding to complex organizational situations and improving job performance.

Research on the relationship between promotion and prevention followership behavior, and job performance is as follows. According to regulatory focus theory, promotion followers with transformational focus tend to be "ideal self," who pursue positive expectations, use promotion methods and strategies to approach goals, are more pioneering in the process of solving problems, and have the courage to solve difficulties and risks. These promotion behaviors have a positive effect on their task and situational performance. Prevention followers with stability focus tend to be "obligatory self," who care about role responsibilities and obligations, lack innovative thinking, tend to maintain regular order, and often use evasive methods and strategies to fulfill the task. These prevention behaviors focus on avoiding work risks and therefore also have a positive effect on their task performance, yet they worry about their own security, tend to maintain the current situation and rely on experience to deal with dynamic situations, and therefore have a negative effect on situational performance [31, 32]. According to followership theory, previous researchers have demonstrated that independent thinking [33], self-leadership [34], change thinking [35], and persisting self-realization [36] belong to promotion behavior, which are conducive to followers' courage to develop and create promotion behavior to improve job performance. Conversely, prevention behavior with characteristics such as blind obedience, scholasticism [37], and lack of responsibility [38] leads to low job input and, in turn, affects job performance. Based on the above two theories, we hypothesize:

3.4.1 Problem 4

Promotion behavior has a significant positive effect on both task and situational performance; prevention behavior has a positive effect on task performance, yet negative effect on situational performance.

3.5 The moderating of self-constructal

In China, with high power and "Guangxi" orientation, how employees perform followership behaviors, in addition to regulatory focus, is also subject to self-constructed behavioral reference models. Huayou et al. [39] define self-constructal as a behavioral orientation in which an individual puts himself in a reference system for cognition. Xu [40] divides self-constructal into two types: independent and interdependent construction, and points out that

different self-constructal orientations have different effects on individual psychological and behavioral processes. Specifically, independent self-constructed individuals are more likely to characterize self-concept by distinguishing the difference between self and others, pay attention to internal traits, and express behavior based on self-perception and trait advantage. Interdependent self-constructed individuals tend to define themselves in social relationships and express behavior according to their role and intentions of the majority in the group.

Independent individuals would like independent thinking, and their responses to situations are based on intrinsic traits [41]. Thus, the higher individuals' independent level is and the more they tend to think independently and of their own advantages, the less they are restricted by external factors in work (except for irresistible factors), which strengthens their promotion attitude and courage and then leads them to flexibly cope with situational changes and solve problems. This means that independent self-constructal strengthens the positive effect of promotion behavior on task performance. At the same time, in order to achieve positive expectations, high independent individuals voluntarily learn new knowledge and skills, actively strive for internal and external support, and increase work input, which has a positive effect on situational performance. In addition, the higher individuals' interdependent level is, the more they pay attention to their similarities with others and behavioral intentions of the majority. In order to be in line with the group, they often give up their own unique cognition and choose to follow the public. This means that interdependent self-constructal weakens the positive impact of prevention behavior on task performance. At the same time, interdependent individuals lack independent judgment and critical thinking and rarely change routine defensive behavior [42]; thus, it strengthens the negative impact of prevention behavior on situational performance. Based on the self-constructal theory, we hypothesize:

3.5.1 Problem 5

Independent self-constructal moderates the relationship between promotion behavior and job performance. Specifically, high independent self-constructal strengthens the positive effect of promotion behavior on task and situational performance; low independent self-constructal is the opposite.

3.5.2 Problem 6

Interdependent self-constructal moderates the relationship between prevention behavior and job performance. Specifically, high interdependence self-constructal weakens the positive impact of prevention behavior on task performance and strengthens the negative impact on situational performance; low dependence self-constructal is the opposite.

4 Methods

4.1 Participants and procedures

Participants are employees and supervisors who have served for more than 1 year in the organization. To improve the reliability of the survey, data are collected from different firms in the state-owned, private, foreign-funded, joint venture enterprises and government organizations in Nanchang, Taiyuan, Shenyang, and Guiyang using 5-point Likert scales (1 = disagree, 5 = fully agree).

To minimize common method variance, we take some steps. First, self-ratings and supervisor ratings are used for this study. Second, data are collected in two waves. At time 1, we measure the antecedents that induce employees' difference in promotion and prevention behavior, in which employees rate proactive and traditional personality and behavioral regulatory focus and supervisors rate the employee's political skills and promotion and prevention behavior. At time 2, after 3 months, we measure the impact of promotion and prevention behavior on job performance, in which employees rate promotion and prevention behavior and independent, interdependent self-constructal, as well as supervisors rate employees' task and situational performance. Besides, two anti-counterfeiting items were set in each questionnaire to prevent participants from false evaluations.

We distribute 2200 questionnaires in total and yielded 1939 responses. After deleting those with missing values or incomplete answers, 1643 valid responses were obtained in two-wave field survey. The effective response rate was 75%. Among the 1643 respondents, 48.5% are male, 51.5% are female. 24.6% are supervisors; 75.4% are employees. For ages, 42.5% are under 30 years, 30.5% are between 31 and 40 years, and 24.3% are over 41 years. For education level, 44.2% have a high school degree or below, 49.3% have a bachelor's degree, and 6.5% have a master's degree. For working years, 44.2% work for less than 10 years, 33.6% for 11 to 20 years, and 22.2% for more than 20 years. For industry type, 38.5% are production and processing company, 44.2% are marketing and service companies, and 17.3% are administrative and public organizations.

4.2 Measures

All measures were rated on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree).

- (1) Traditional personality: Traditional personality was measured with eight-item scale used in the study by Farh et al. (1997). Cronbach's alpha was 0.84.
- (2) Proactive personality: Proactive personality was measured with ten-item PPS reduced version scale. Cronbach's alpha was 0.83.
- (3) Regulatory focus: Regulatory focus was measured by twenty-item WRF scale adopted from Meu-Bert

et al. (2008), including two dimensions: promotion and prevention focus. Cronbach's alpha was 0.80 and 0.82, respectively.

- (4) Followership behavior: Followership behavior was measured with thirty-item scale developed by Xu et al. (2018), including two sub-scales for promotion and prevention behavior. Cronbach's alpha was 0.83 and 0.86, respectively.
- (5) Political skills: Political skills were measured with four-dimensional eighteen-item scale adapted from Ferris et al. (2005). Cronbach's alpha was 0.85.
- (6) Self-constructal: Self-constructal was measured with the scale used by Ng in his PhD thesis, including two sub-scales: independent and interdependent self-constructal; each sub-scale has 5 items. Cronbach's alpha was 0.79 and 0.82, respectively.
- (7) Task performance: Task performance was measured with the seven-item scale developed by Williams and Anderson (1991). Cronbach's alpha was 0.86.
- (8) Situational performance: Situational performance was measured with the fifteen-item scale compiled by Vanscotter and Motowidlo (1996). Cronbach's alpha was 0.81.
- (9) Control variables: We take demographic factors as control variables, which include gender (1 = male, 2 = female), age (in years; 1 = under 30 years, 2 = between 31 and 40 years, 3 = over 41 years), education level (1 = high school degree or below, 2 = bachelor, 3 = master), company type (1 = production and processing company, 2 = marketing and service company, 3 = administrative and public organization)

5 Experiments

5.1 Preliminary analysis

In order to examine discriminates validity, we perform a confirmatory factor analysis to the overall model before testing the hypotheses. We compare the 11-factor model with two alternative models (nine-factor and six-factor). The 11-factor model demonstrates a good fit ($\chi^2 = 467.48$; $df = 265.12$; $CFI = 0.926$; $IFI = 0.919$; $GFI = 0.913$; $RMSEA = 0.051$; $RMP = 0.048$). The 11-factor model shows a better fit than alternative models, which indicates that the variables have high discriminates validity in this study.

5.2 Descriptive statistics and correlations

Table 1 presents the means, standard deviations, and correlations among all variables in this study. As shown in Table 1, proactive personality is positively related to task and situational performance ($r = 0.42$, $p < 0.001$; $r = 0.31$, $p < 0.01$); promotion focus ($r = 0.42$, $p < 0.01$; $r = 0.37$, $p < 0.01$); political skills ($r = 0.35$, $p < 0.01$; $r = 0.42$, $p < 0.001$); promotion behavior ($r = 0.38$, $p < 0.01$; $r = 0.40$, $p < 0.01$);

and independent self-constructal ($r = 0.29$, $p < 0.05$; $r = 0.23$, $p < 0.05$). Traditional personality is negatively related to situational performance ($r = -0.25$, $p < 0.05$) and prevention focus ($r = -0.24$, $p < 0.05$); prevention behavior is positively related to situational performance ($r = 0.23$, $p < 0.05$). Interdependent self-construction has nothing to do with task and situational performance.

5.3 Tests of problems

In order to test the mediating role of regulatory focus in the relationship between personality preference and followership behavior, we compare its full mediation model, partial mediation model, and zero mediation model. The results indicate that in the relationship between proactive personality and promotion behavior, the fitting coefficient of the promotion focus full mediation model is $\chi^2/df = 5.28$, $GFI = 0.909$, $CFI = 0.921$, $IFI = 0.918$, and $RMSEA = 0.07$; in the relationship between traditional personality and prevention behavior, the fitting coefficient of the prevention focus full mediation model is $\chi^2/df = 4.87$, $GFI = 0.930$, $CFI = 0.917$, $IFI = 0.922$, and $RMSEA = 0.08$. The two groups show better fitting coefficients and are better than partial and zero mediation models. Thus, this study adopts the regulatory focus full mediation model. We use the structural equation to perform regression analysis on the influence path of regulatory focus in the relationship between personality preference and followership behavior (Fig. 2).

As shown in Fig. 2, the direct influence coefficient of proactive personality on promotion behavior is 0.434. After being mediated by promotion focus, the effect decreased to 0.101; traditional personality on prevention behavior is 0.446. After being mediated by prevention focus, the effect decreased to 0.097. This means proactive, traditional personality on promotion and prevention behavior has an indirect positive influence, respectively. Thus, Problem 1 is supported. In addition, the positive influence coefficient of proactive personality on promotion focus is 0.652, and the positive influence coefficient of promotion focus on promotion behavior is 0.779. Thus, promotion focus has a significant full mediation effect on the relationship between proactive personality and promotion behavior, which effect size is $0.652 * 0.779 = 0.508$ ($p < 0.001$). Traditional personality on prevention focus is 0.648, and prevention focus on prevention behavior is 0.755. Thus, prevention focus plays a significant full mediation effect in the relationship between traditional personality and prevention behavior, which effect size is $0.648 * 0.755 = 0.489$ ($p < 0.001$). Thus, Problem 2 is supported.

Furthermore, we establish a regression equation between promotion, prevention behavior and task, situational performance, respectively. The regression coefficient β and significance are used to test the main effect of promotion and prevention behavior on task and situational performance,

Table 1 Means, standard deviations, and correlations

Variables	M	SD	1	2	3	4	5	6	7	8	9
Promotion RS	5.221	0.921	1								
Prevention RS	4.832	0.875	0.223	1							
Self-constructal	5.075	0.942	0.544***	0.105	1						
Proactive P	5.120	0.906	0.082	0.557***	0.237	1					
Traditional P	4.853	0.775	0.621***	0.462**	0.604***	0.472**	1				
Political skills	5.252	0.796	0.573***	0.387*	0.541***	0.434**	0.508***	1			
Task performance	5.367	0.843	0.536***	0.430**	0.572***	0.403**	0.403**	0.562***	1		
Promotion B	4.826	0.926	0.605***	-0.072	0.622***	0.067	0.566***	0.559***	0.586***	1	
Prevention B	4.753	0.915	0.107	0.563***	-0.104	0.625***	0.314*	0.205	0.207	0.086	1

N = 857. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

respectively. As shown in Table 2, promotion behavior has an impact on task performance, in which the β is 0.672, $p < 0.001$ (step 3), and on situational performance, in which the β is 0.596, $p < 0.001$ (step 7). Prevention behavior has an impact on task performance, in which the β is 0.323, $p < 0.05$ (step 4), and on situational performance, in which the β is -0.215 , $p < 0.01$ (step 8). Thus, Problem 4 is supported.

Finally, to test the moderating role of political skills and self-constructal, we use a method provided by Li and Tu (2011) about the high and low moderation effects of moderator variables. Specifically, first, we calculate the parameter estimate of the least squares regression by using the default loss function to minimize the residual square by the constrained nonlinear model. Second, these estimated coefficients are imported into Excel for calculation. The results are shown in Tables 3 and 4. Third, the moderating effect is drawn according to the software recommended by Edwards and Lambert (2007).

As shown in Tables 3 and 4 and Figs. 3 and 4, the difference in political skills moderates the relationship between individual’s personality tendency and behavioral regulatory focus. High political skills strengthen the influence of proactive personality on promotion focus and weaken the influence of traditional personality on prevention focus. Low political skills are the opposite. Problem 3 is supported.

As shown in Tables 3 and 4 and Figs. 5, 6, 7, and 8, self-constructal plays a differential role in the relationship between promotion and prevention behavior and job performance. High independent self-constructal strengthens the positive effect of promotion behavior on task and situational performance; low is the opposite. High interdependent self-constructal weakens the positive effect of prevention behavior on task performance and strengthens the negative effect on situational performance; low is the opposite. Both Problem 5 and Problem 6 are supported.

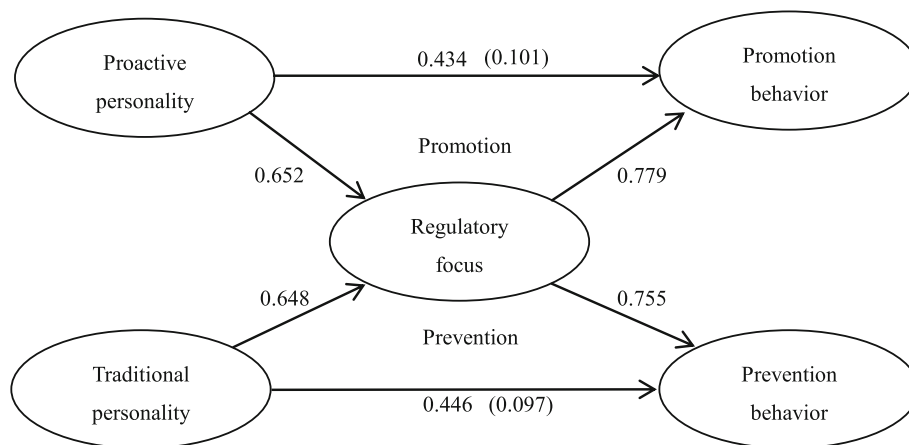


Fig. 2 Regulatory focus as the mediator variable’s influence path. Note that data in () is the direct influence coefficient of the independent variable on the dependent variable after adding mediation variable

Table 2 Impact of promotion and prevention behavior on job performance

Variables	Task performance				Situational performance			
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
Gender	0.121	0.140	-0.089	0.153	-0.206	0.177	0.204	0.183
Education	0.206	-0.187	0.114	-0.151	0.167	0.242	0.196	0.214
Working year	0.184	0.173	-0.108	0.175	0.212	0.188	-0.079	0.153
Job nature	-0.135	0.028	0.087	0.162	-0.097	0.143	0.210	0.147
Promotion B			0.672***				0.596***	
Prevention B				0.323*				-0.215**
F	2.847	4.178	20.354	7.415	26.235	19.352	24.587	30.613
R ²	0.125	0.207	0.258	0.194	0.412	0.353	0.367	0.402
ΔR ²	0.118	0.173	0.138	0.076	0.203	0.154	0.127	0.250

N = 786. *p < 0.05, **p < 0.01

6 Results and discussion

6.1 Theoretical implications

The theoretical contribution of this study is to broaden the boundary and enrich the antecedent mechanism and consequence mechanism to followership theory. Previous studies have studied followership behavior only from a single, positive perspective. However, we study the reasons that lead to promotion and defense behavior, as well as their impact on job performance in the organization from a discrepancy perspective. The specific theoretical implications are as follows.

- (1) Based on a discrepancy perspective, in the antecedent mechanism of followership behavior, this study demonstrates personality, promotion, and prevention regulatory focus, and political skills are the antecedents that cause followership behavior to differentiate into promotion and prevention. Above all, employees with proactive personality tend to adopt innovative thinking methods to consider problems, so they are more likely to take promotion behavior to reply to the external environment;

traditional personality tends to take actions according to behavioral norms, so they are more likely to take prevention behavior to complete tasks. Next, with regulatory focus as a mediator, employees with proactive personality pay more attention to success and reward, which stimulate their own promotion focus and then lead to promote behavior; traditional personality is more concerned about failure and punishment, which stimulate their own prevention focus and then lead to prevention behavior. In addition, with political skills as moderators, employees with high political skills have higher social efficacy and are easy to perceive and get support and trust. Therefore, high political skills strengthen the relationship between proactive personality and promotion focus and weaken the relationship between traditional personality and prevention focus; the opposite moderating effect applies to low political skills. The theoretical construction of the antecedent mechanism is supported by Problem 1, Problem 2, and Problem 3.

Table 3 Moderation effect of political skills and self-constructural

Variables	Stage	Effect				
		Stage 1	Stage 2	Direct effect	Indirect effect	Total effect
Political skills	High	0.374***	0.410***	0.267**	0.189*	0.454***
	Low	0.094	0.121*	-0.073	0.126 ^o	0.053
	Difference	0.260**	0.289**	0.340***	0.063	0.401***
Independent self-constructural	High	0.355***	0.402***	0.304***	0.173*	0.477***
	Low	0.102	0.133*	0.114*	0.106 ^o	0.220**
	Difference	0.253**	0.269**	0.190*	0.067	0.257**
Interdependent self-constructural	High	0.131*	0.152*	0.234**	0.163*	0.397***
	Low	0.203**	0.187*	0.183*	0.131 ^o	0.296**
	Difference	-0.072	-0.035	0.051	0.032	0.101*

The sample size of political skills is 857 and self-constructural is 786. *p < 0.05, **p < 0.01, ***p < 0.001

Table 4 Moderation effects of political skills and self-constructual interactions

Interaction terms	Promotion focus	Prevention focus	Task performance	Situational performance
Political skills × proactive personality	0.584***	0.106*		
Political skills × traditional personality	0.165*	0.263**		
R^2	0.106	0.098		
ΔR^2	0.092***	0.071*		
Independent self-constructual × promotion behavior			0.605***	0.0458***
Interdependent self-constructual × promotion behavior			0.184*	-0.215**
R^2			0.113	-0.078
ΔR^2			0.085***	-0.057

The sample size of political skills is 857 and self-constructual is 786. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

(2) We also study the consequence mechanism of followership behavior from a discrepancy perspective. We test the differential moderating effect of independent, interdependent self-constructual to the relationship between promotion and prevention behavior and job performance. Employees with independent self-constructed are more likely to respond to external situations based on their own traits and are less subject to outside interference. Therefore, it strengthens the positive effects of promotion behavior which include rising to the challenge, innovation, reformation, and aggressive behavior and so forth on task and situational performance. Interdependent self-constructual is more likely to use the group's standards as its own code. Therefore, it weakens the positive impact of prevention behavior on task performance and strengthens the negative impact on situational performance. In other words, they focus on avoiding risks, so they can ensure that tasks are completed. However, in the Chinese context where interpersonal relationships are important, there is often a phenomenon in which shared responsibility and law (penalty) are difficult

to blame for the majority of people, which lead avoiding risks to turn into negative evade responsibility and punishment, and thereby losing its positive meaning. The theoretical construction of the consequence mechanism is supported by Problem 4, Problem 5, and Problem 6.

6.2 Practical implications

Besides theoretical contributions to followership theory from a discrepancy perspective, this study also has guidance and enlightenment value for the management practice in the organization.

- (1) Employees' behavior is influenced by their personality, political skills, and regulatory focus. Moreover, their behavior also affects job performance by self-construction. According to the detailed results, supervisors should attach great importance to the inherent qualities of employees. In order to improve performance in the organization, supervisors should impel employees' proactive personality, promotion focus, and high political skills to do more promotion behavior, which contributes to the healthy long-term development of the organization.

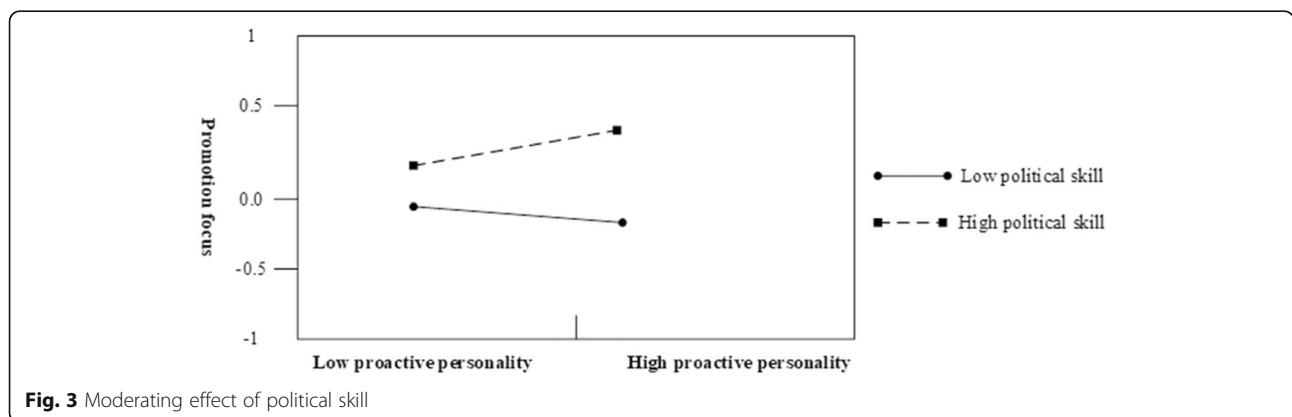


Fig. 3 Moderating effect of political skill

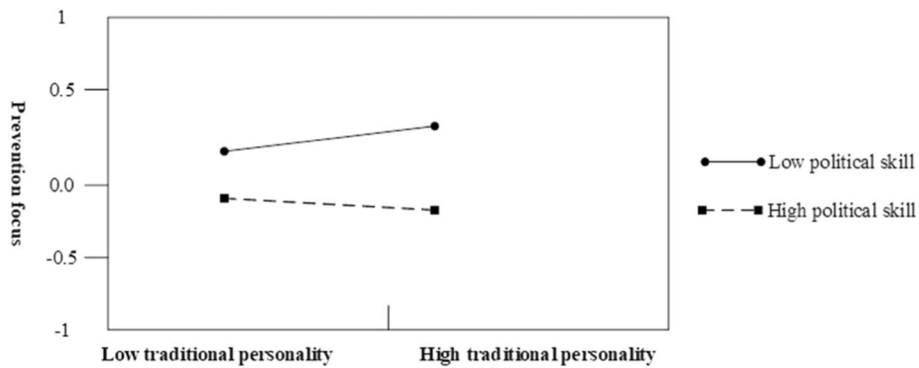


Fig. 4 Moderating effect of political skill

- (2) Behavioral regulatory focus mediates the relationship between personality tendency and behavior. Therefore, employees should coordinate the relationship between the external situation, internal trait, self-requirement, and expected goal, which are the basic elements of regulation and control behavior, to maximize their advantages. Doing so can stir more innovative behavior for employees to help leaders and organizations tackle barriers.
- (3) Political skills not only strengthen the positive effects of individual traits but also weaken or eliminate the negative effects of adverse interpersonal or environmental factors. Therefore, employees should strive to amend their political skills. For example, employees should broaden their connections, augment their influence and seize opportunities to pursue excellence job performance.
- (4) Self-construction moderates the relationship between followership behavior and job performance, in which independent self-construction can inspire employees' creative potential to exalt job performance; on the contrary,

interdependent self-construction can eliminate employees' awareness of risk aversion and consolidate dependence on groups or others, which in turn negatively affects situational performance. Therefore, employees should emphasize training their independence. When faced with conundrums, they dare to flexibly use their own thinking to solve. Combining the overall results, managers should improve incentive mechanism, optimize the program of managing followers to incite employees to learn new skills, boost work investment, and actively handle troubles.

7 Conclusion and analysis

The rest of this paper is organized as follows: Section 2 is the social networks' prediction problem of topics' social impact trends. We consider both the structure similarity and topical property of social networks, for example, personality preference and employee followership behavior. The existing user-generated content can be summarized with a set of valued sequences. Moreover, we introduce a novel hybrid similarity measure, and the best matching based supervised learning process

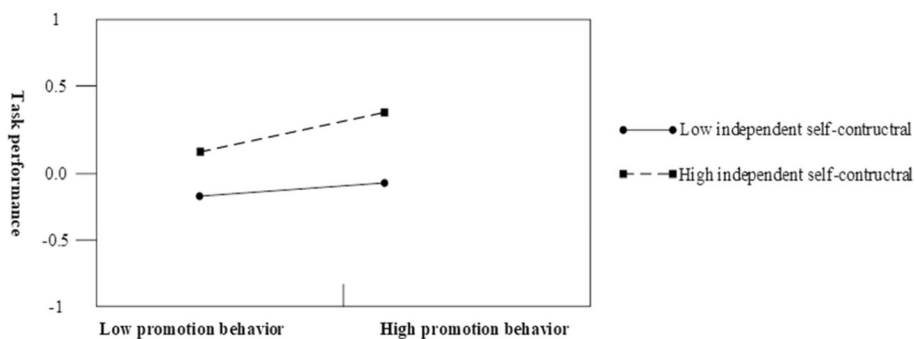
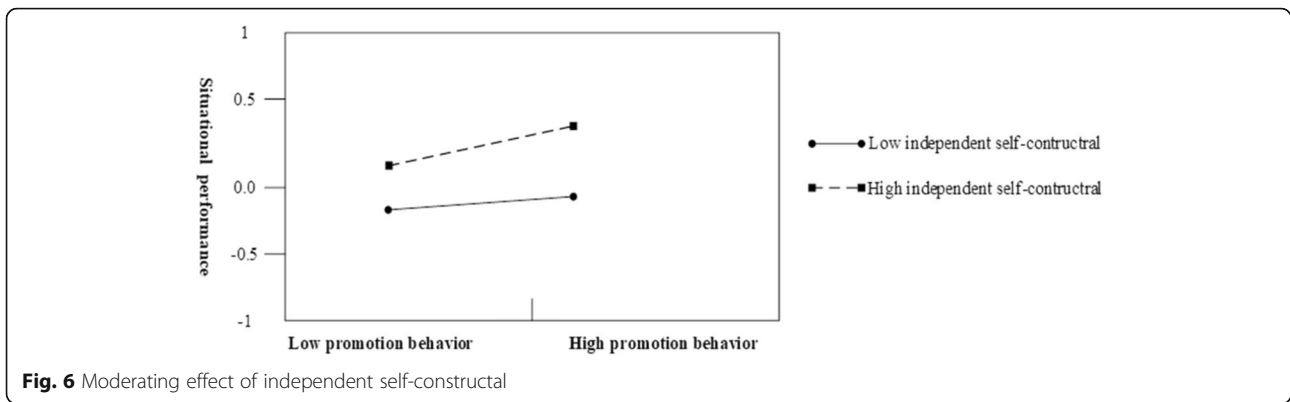


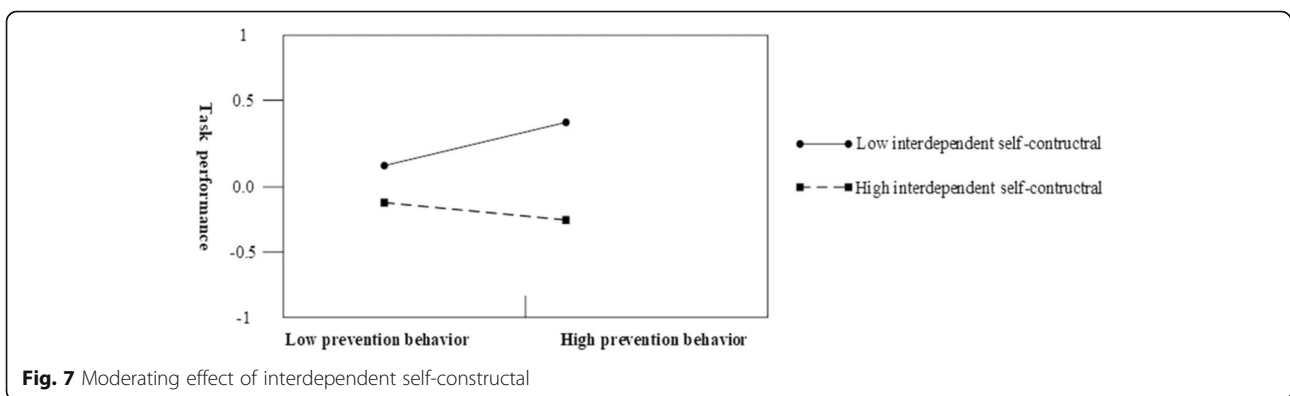
Fig. 5 Moderating effect of independent self-constructual

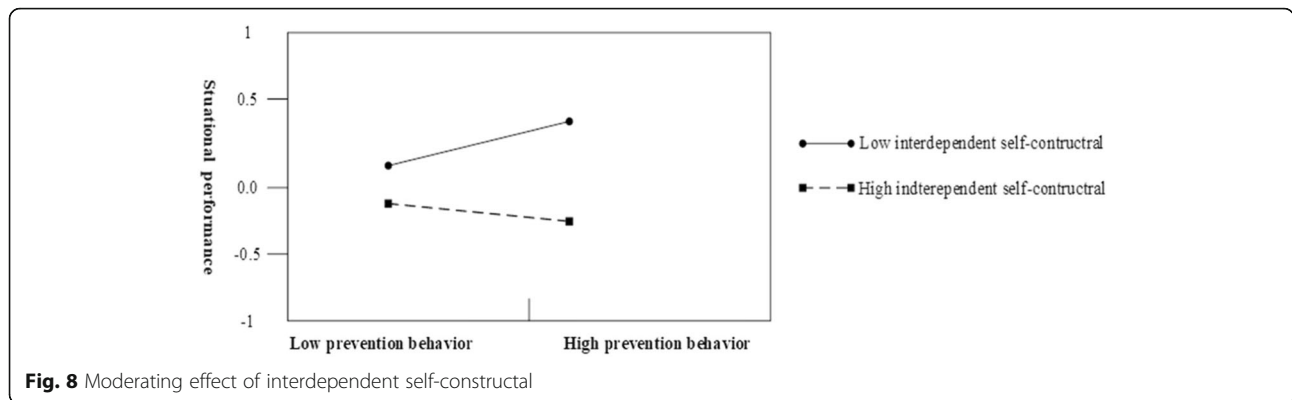


is conducted for training the time series. The events before the current timestamp can be adopted as a training set, and an early predictor will be generated by learning the rules from the training set. The newly coming events will be used for verifying the predictor, or assessing and tuning it. These techniques are interesting and useful, and they have a brilliant perspective on social network analysis and data mining. This study draws some conclusions through empirical analysis: (1) personality preference has a positive effect on followership behavior. The relationship is mediated by regulatory focus. (2) Political skills differential moderates the relationship between personality and behavioral regulatory focus. (3) Promotion behavior significantly positively impacts task and situational performance; prevention behavior positively impacts task performance and negatively impacts situational performance. These relationships are moderated by self-constructal. These findings clarify the antecedents' mechanism for differences in followership behavior and consequences mechanism that followership behavior differently impacts job performance, which provides a compass for research direction in the future.

Future work will cover the extension of the proposed approach from a three-dimensional regulatory

focus scale, which developed by [43] mainly measures typical behavior of regulatory focus (e.g., moral, authoritarian, differential treatment in favors) and is difficult to measure the different regulatory focus of PL. Hence, in this study, Meu-Bert's WRE scale is used to do the empirical measurement. The three-dimensional typical characteristics and influence path of regulatory focus are expounded, but it is insufficient to interpret the different regulatory orientation of regulatory focus with three-dimensional characteristics. Moreover, subjects lack a wide range of regional representation because their number is less, and only from organizations in China. In future studies, it is necessary to increase samples, or to test the results repeatedly in a different region, so as to improve the external validity. Social networks' linking relationships are often the mapping of real relationships in society. How to identify such real social relationships through tagging information in social networks is also a challenging problem. In the future, the relationship between employees and leaders can be inferred by the change in the number of conversations in academic cooperative networks [44–46]. So, can we design a method in online social networks to





extract social relationships such as family and colleagues? Extraction and identification of specific relationships can help people better understand the formation mechanism of social network structure, so related technologies can be effectively applied in relationship recommendation and prediction of enterprise development and other application fields.

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In this paper, the corresponding authors are Ruliang Guo (13607083913@163.com) and Wenyuan Zhang(18749320887@163.com).

About the authors

Sheng Xu is a professor at Jiangxi Agricultural University, China. He received his PhD from the University of Jiangxi University of Finance and Economics. He has published more than 30 research papers and 3 books. His research concerns the Mechanism of the Effect of Social Network on Followership Behavior from a different perspective and in different circumstances. Email: fanny_042@163.com.

Tonghua Yang is an associate professor at Jiangxi Agricultural University, China. He has published more than 10 research papers and 2 books. His current major research fields include information management and learning performance. Email: yangth883@163.com.

Ruliang Guo is an associate professor at Jiangxi Agricultural University, China. He has published more than 20 research papers and 5 books. His current major research fields include human resource management and learning performance. Email: 13607083913@163.com.

Wenyuan Zhang is currently a Master's student at the College of Intelligence and Computing of Tianjin University, China. His research interests are data mining, cloud computing, security, and deep learning. Email: 1226138183@qq.com

Authors' contributions

SX is the main writer of this paper. SX and RG proposed the main idea. SX completed the experiments. SX and WZ analyzed the results. SX, RG, WZ, and TY discussed feasibility analysis. SX, WZ, and TY gave some important suggestions for this paper. RG and WZ are the corresponding authors of this paper. All authors read and approved the final manuscript.

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Availability of data and materials

The data can be made available by sending a request via e-mail to fanny_042@163.com.

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